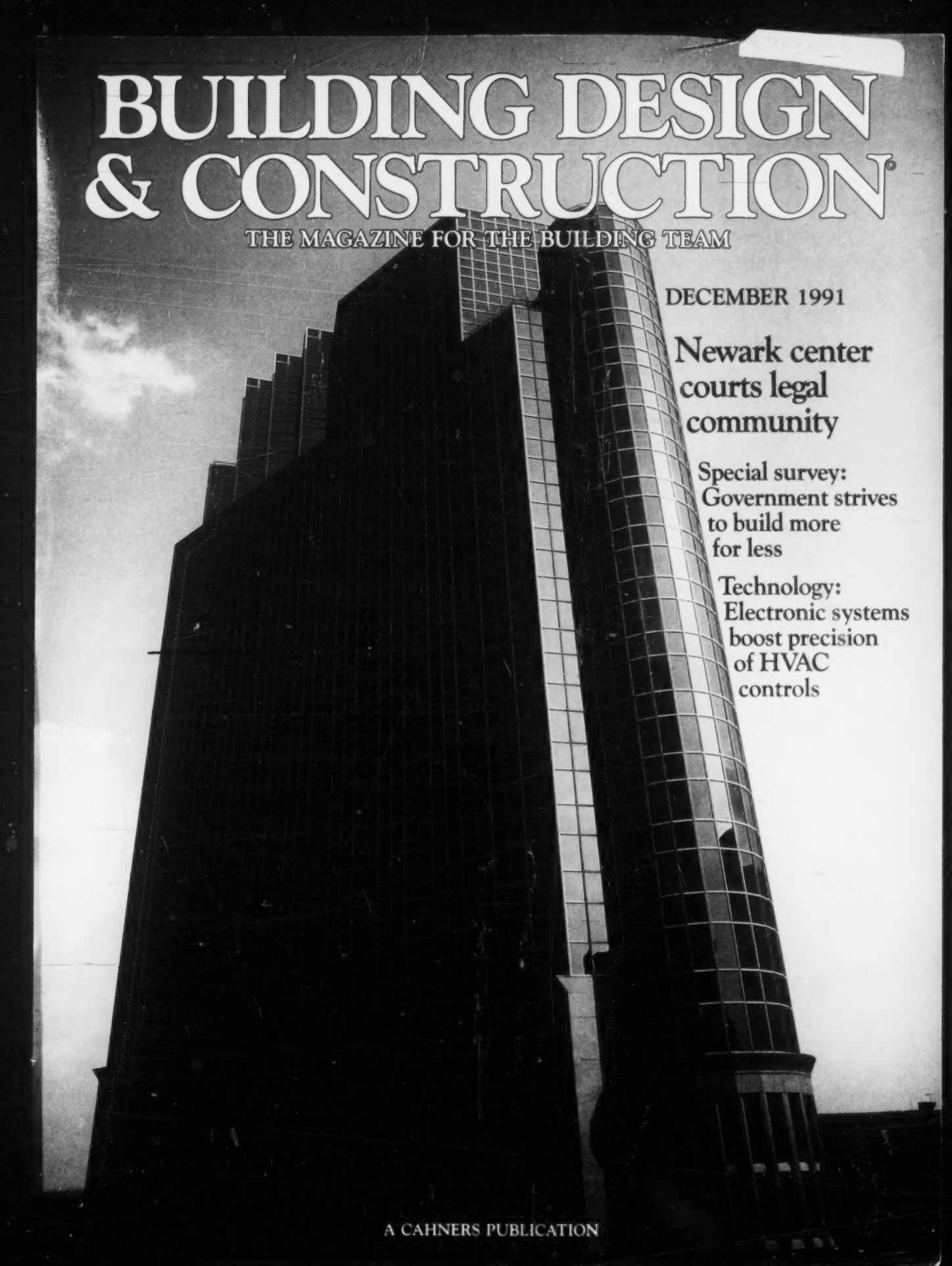
BUILDING DESIGN & CONSTRUCTION

THE MAGAZINE FOR THE BUILDING TEAM



DECEMBER 1991

Newark center courts legal community

Special survey: Government strives to build more for less

Technology: Electronic systems boost precision of HVAC controls

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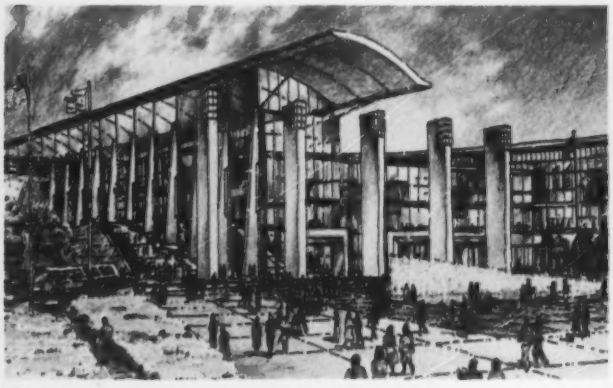
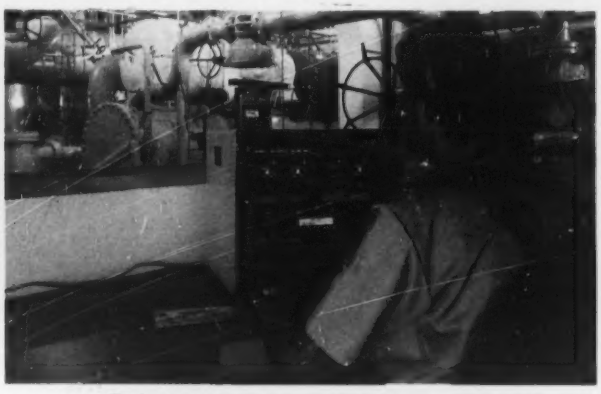
BUILDING DESIGN & CONSTRUCTION

VOL. 32, NO. 13 THE MAGAZINE FOR THE BUILDING TEAM DECEMBER 1991





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Cover: The Newark Legal Center in New Jersey. Article begins on p. 34. Photo: Stan Lichens

SURVEY OF PUBLIC SECTOR CONSTRUCTION

Government strives to build more for less

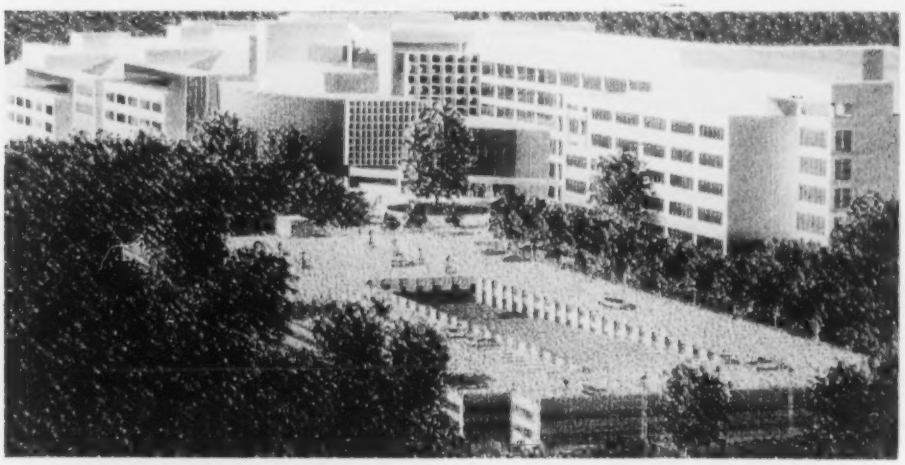
Delivery and contract initiatives emulate the private sector

By Christopher Olson, Managing Editor

Public-sector projects — comparatively unscathed by the strife in the commercial building market — are a target that many marketing tacticians are aiming to hit. Particularly among federal agencies, spending levels have remained relatively constant, shielded from the overbuilding and credit shortages that have devastated markets in the private sector.

Nevertheless, public agencies are under the gun to deliver more construction for less money. Funds for new projects are becoming ever more difficult to shake loose from legislators, and construction procedures are coming under increasing scrutiny in efforts to stunt waste and delays. During the Reagan years, the lean business practices of the private sector were often held up as an ideal for government, and this attitude is still apparent in the attempts by many government agencies to re-examine procedures and explore alternative delivery methods.

BD&C's survey of public building construction reflects a variety of initiatives undertaken by government agencies to build more for less. The commonwealth of Pennsylvania's Department of General Services, for example, began construction last summer on four prison projects that implement an innovative lease-purchase program. Leases signed with various development teams include appendices with prototypical plans developed earlier by the state. Each project utilizes a construction manager under contract directly to the Department of General Services. Design and construction of the



GSA's 1.7 million-sq.-ft. National Archives and Records Administration *complex on the campus of the University of Maryland in College Park is scheduled for completion in 1993. Gilbane is the construction manager; the joint-venture project architects are Hellmuth, Obata & Kassabaum and Ellerbe Becket.*

new facilities are expected to take less than three and one-half years, while conventional delivery for similar projects had required as many as seven years.

Last August in Chicago the General Services Administration dedicated the first of several office buildings nationwide that combine elements of lease-purchase agreements and design/build delivery. In the case of the 27-story, 800,000-sq.-ft. project in downtown Chicago, GSA directed private development teams to bid on a total package including site, design, construction and long-term financing. The building was delivered on budget and four days ahead of schedule.

According to Tom Graves, director of GSA's Design and Construction Programs Division, projects over $1.6 million may be evaluated by regional GSA offices as candidates for design/build delivery. While GSA headquarters does supply some general guidance to the regional offices on the design/build issue, Graves acknowledges that such decisions, more often than not, are judgment calls. More specific instructions are in the process of being formalized by an internal GSA order.

GSA guidelines for the use of construction managers, however, are more specific: CMs are generally used on projects over the $1.6 million threshold, with individual firms being selected for bundles of these small projects located in the same region. Each project over $10 million is awarded on an individual basis.

Revising contracts and selection rules

Other agencies are reconsidering the effectiveness of their construction documents. The Kansas Division of Architectural Services is currently rewriting the state's construction documents in order to use standard AIA contracts as a base. "When we're finished, we'll have a set of documents that any design or construction professional would recognize and would know the obligations that they would be assuiming if they do business with the state," explains Gerald Carter, deputy director of planning and project management. Kansas is also re-evaluating its contractor prequalification procedure, seeking to ensure that general contractors and subcontractors have the wherewithal to complete work on which they intend to bid.

A new administration in the state of Ohio has made cost-cutting a high priority. In addition to slashing fees for basic design services, the Division of Public Works revised its architect/engineer selection procedure last summer. While the former procedure led to selection of a single "best-qualified" firm, current regulations allow several "best-qualifieds" to be designated for a project. The state then makes the final cut on the basis of price.

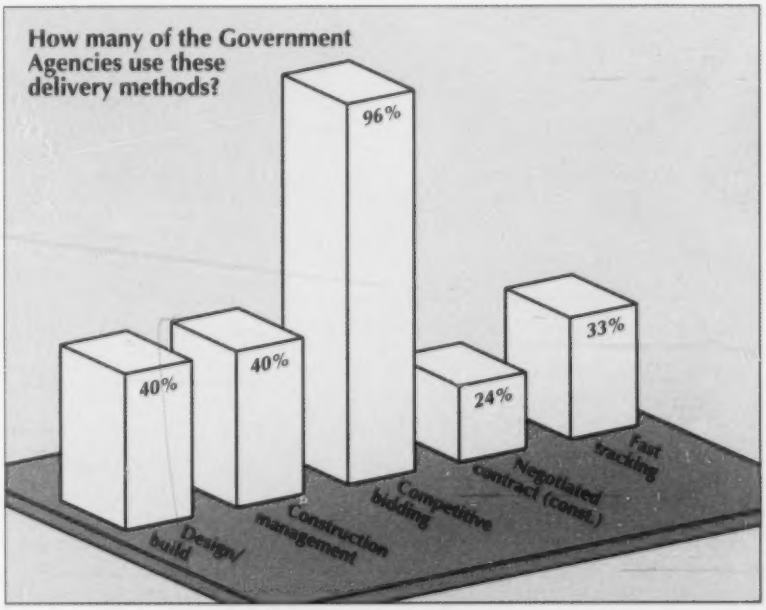
Multiple vs. single prime contracts

Requirements for multiple prime contracts are often cited as a factor in the higher cost of public construction. One government project manager estimated that multiple primes add 10 to 15 percent to the construction costs of some projects, and complicate scheduling and bidding as well.

The state of North Carolina is in the midst of a five-year experimental program begun in 1989 that allows the owning agency to solicit single prime contracts *in addition to* multiple primes (rather than single primes exclusively) for selected projects. According to a researcher in the North Carolina State Construction Office, a preliminary audit of the program indicated only a marginal difference in the costs for projects that utilized the multiple-prime option. However, the sample available at this early stage in the program was small. Further evaluation of the program is planned for the future.

Individual reports on the government agencies included in the survey appear on the following pages. □

***Competitive bidding** for construction remains the most widely used delivery method among the government agencies surveyed. The U.S. Postal Service, which utilizes negotiated contracts for most of its construction projects, is the sole agency that did not report some use of conventional competitive bidding.*



Survey of Government Agencies

The following survey ranks a sampling of state and federal agencies in descending order on the dollar value of construction and reconstruction put in place for a 12-month period between 1990 and 1991, corresponding to the start and end of each agency's fiscal year. The agencies were asked to report only the base building or "hard" construction costs in the dollar value. For projects extending beyond one year, only the value of the construction put in place for the given fiscal year was reported. Nonbuildings construction, such as road and bridge work, as well as single-family housing, have been excluded from the reported dollar volume.

Government agency	Value of construction, fiscal 1990-91	Recent construction activities
U.S. General Services Administration (GSA) 18th & F Streets, N.W. Washington, DC 20405	**$1,543,300,000**	GSA has been one of the federal leaders in implementing alternative delivery methods, including design/build and construction management. Design competitions will be utilized on selected major projects beginning in 1993. The unprecedented increase in capital construction during fiscal 1991 is due to an ongoing initiative to increase the ratio of federally owned office space to leased space.
U.S. Postal Service 475 L'Enfant Plaza Washington, DC 20260	**$1,441,000,000**	The Postal Service used negotiated construction contracts for 70 percent of its projects; design/build was used for another 20 percent. The agency's standard plans or "kit of parts" program is being extended to accommodate buildings up to 200,000 square feet. The estimated value of construction to be put in place during the fiscal year ending September 1992 is $1,182,000,000.
New York State Dormitory Authority 161 Delaware Ave. Delmar, NY 12054	**$619,000,000**	This chartered agency provides construction and financing for state and nonprofit institutions, including universities and hospitals. Educational facilities accounted for 76 percent of construction work. Construction management, which is used on very large projects, was utilized on 60 percent of the agency's projects. Regional term contracts are being used for various sampling, testing and monitoring services.
U.S. Department of Veterans Affairs 810 Vermont Ave., N.W. Washington, DC 20420	**$588,000,000**	Competitive bidding is used for construction of all projects. Reconstruction/renovation accounted for 31 percent of work. Ninety-six percent of the agency's construction involved various health care facilities, including nursing home care units, ambulatory care facilities and medical centers. Contract awards for the current fiscal year are expected to total $670 million.
NASA 400 Maryland Ave., S.W. Washington, DC 20546	**$448,200,000**	NASA construction projects include space flight control centers, space shuttle manufacturing facilities, materials research labs, electronics labs and life sciences labs. Design/build, construction management, competitive bidding and negotiated contracts for construction are used.

Government agency	Value of construction, fiscal 1990-91	Recent construction activities
New York State Office of General Services Tower Building, 35th Floor Albany, NY 12242	**$411,982,000**	One-half of this agency's construction involved prisons, although the emphasis has shifted dramatically from new construction to rehabilitation and maintenance of existing prisons. Competitive bidding is used exclusively for construction. The value of building construction put in place during the current fiscal year is expected to decrease to $238 million.
Massachusetts Division of Capital Planning and Operations One Ashburton Place Boston, MA 02108	**$328,000,000**	In addition to competitive bidding for construction, design/build and construction management are used. Building types include prisons (50 percent), health care (20 percent), educational (15 percent), court facilities (10 percent) and offices (5 percent). The agency expects to award contracts totaling $100 million during the current fiscal year.
U.S. Public Health Service 5600 Fishers Lane Rockville, MD 20857	**$289,000,000**	Hospitals/health care facilities accounted for 55 percent of construction volume, while labs and research facilities accounted for another 40 percent. Design/build as well as competitive bidding for construction are used. No design or construction is done in house. Several lab buildings for the National Institutes of Health are underway in Bethesda, Md.
Ohio Division of Public Works 30 E. Broad St., 35th Fl. Columbus, OH 43266	**$281,983,000**	A variety of educational and sports facilities for higher education accounts for nearly half of this agency's construction volume. Construction management and design/build are used in addition to fast tracking and competitive bidding for construction. Under a new administration, the state is currently revising its A/E selection procedure.
California Department of Corrections 501 J St., Suite 300 Sacramento, CA 94283	**$270,000,000**	All construction involves correctional facilities and related structures. Construction volume for the current fiscal year is expected to increase to $400 million. Reconstruction/renovation accounted for 12 percent of 1990-1991 volume.
Connecticut Department of Public Works 165 Capitol Ave. Hartford, CT 06106	**$264,120,000**	New legislation allows this agency to conduct direct negotiations with design professionals and contractors to accommodate an accelerated prison expansion program. Prisons accounted for 65 percent of construction and higher education for 8 percent. For the current fiscal year, construction volume is expected to increase to $325 million.
Federal Bureau of Prisons 320 First St., N.W. Washington, DC 20534	**$256,089,000**	A large expansion program is driving construction volume upward for this agency, which is responsible for construction of federal prisons throughout the U.S. The agency expects to award construction contracts totaling $332 million during the current fiscal year. Six new projects with a total of 8,700 beds are under construction, and six more with 6,800 beds are in design.
Kansas Division of Architectural Services 625 Polk St. Topeka, KS 66603	**$202,000,000**	This state agency is currently revising its policy manual and upgrading its construction documents, using the standard AIA documents as a basis. The recent completion of an extensive prison program is generally driving construction volume downward. Construction contracts for some 281 projects totaling $154 million will be awarded during the current fiscal year.
Pennsylvania Department of General Services 18th & Herr Streets Harrisburg, PA 17120	**$200,000,000**	Using an innovative lease/purchase initiative with various development teams, this state agency currently has four fast-tracked, 1,000-bed prisons under construction. Correctional facilities accounted for 65 percent of construction, followed by educational facilities (15 percent) and health care (10 percent). Volume for the current fiscal year is expected to increase to $350 million.
Hawaii Department of Accounting and General Services P.O. Box 119 Honolulu, HI 96810	**$165,333,000**	Eighty-six percent of construction volume consisted of educational facilities. Competitive bidding is used exclusively for construction. Reconstruction/renovation accounted for 70 percent of volume. Expenditures for current fiscal year are expected to increase marginally to $170 million.

Government agency	Value of construction, fiscal 1990-91	Recent construction activities
North Carolina State Construction Office 300 N. Salisbury Raleigh, NC 27603	**$154,220,000**	North Carolina is studying the results of a trial program allowing state agencies to solicit single prime contracts in addition to multiple prime contracts. The state is also implementing a program that sets a goal of 10 percent for minority participation. Schools/educational facilities accounted for approximately 81 percent of construction expenditures.
Louisiana Department of Facility Planning and Control P.O. Box 94095 Baton Rouge, LA 70804	**$148,000,000**	Educational facilities accounted for one-half of building expenditures. Competitive bidding for construction is used on 95 percent of projects, and negotiated contracts for the remaining 5 percent. Less than 50 percent of design and no construction done in house.
Minnesota Division of State Building Construction 50 Sherburne Ave. St. Paul, MN 55155	**$144,500,000**	Competitive bidding is used exclusively for construction. Schools/educational facilities are the largest share of work at 30 percent, followed by prisons (20 percent), health care (15 percent) and office buildings (15 percent). A $60 million history center in the St. Paul capitol complex is scheduled for completion in late 1992.
Arkansas State Building Services 1515 W. Seventh St., Suite 700 Little Rock, AR 72201	**$120,000,000**	Expenditures for building construction during the fiscal year ending June 1992 are projected to increase to $144 million. Competitive bidding is used exclusively for construction. Volume of prison construction is rising. Projects under construction include a $10 million, maximum-security prison and various classroom, lab and dormitory buildings at state universities.
Wisconsin Division of State Facilities Management P.O. Box 7866 Madison, WI 53707	**$114,000,000**	Competitive bidding for construction is used on 95 percent of projects and design/build on the remaining 5 percent. Reconstruction/renovation accounted for 50 percent of expenditures. Spending is expected to increase to $150 million during the current fiscal year. Corrections projects totaling $143 million are presently under way.
U.S. Department of Transportation 400 Seventh St., S.W. Washington, DC 20590	**$90,000,000**	This federal agency's construction involves stations for the U.S. Coast Guard in addition to communications, navigational and air traffic control centers for the Federal Aviation Administration. Less than 50 percent of design and no construction done in house. Only competitive bidding is used for construction. Reconstruction/renovation accounted for 80 percent of spending.
Arizona Facilities Design and Construction Office 1700 W. Washington St. Phoenix, AZ 85007	**$60,000,000**	Prisons accounted for the major share (50 percent) of this agency's construction, followed by office buildings (35 percent) and educational facilities (15 percent). Competitive bidding is used exclusively for construction. Projects underway include two medium-security prisons, a state office building and a museum in Phoenix undergoing historic rehabilitation.
New Jersey Division of Building and Construction CN 235 Trenton, NJ 08625	**$58,221,000**	Ninety-seven percent of this agency's projects employ competitive bidding for construction; construction management, design/build, negotiated construction contracts and fast tracking are used on a very limited basis. Expenditures for building construction are projected to increase to $82 million during the current fiscal year. Reconstruction/renovation accounted for 65 percent of volume.
Michigan Office of Facilities P.O. Box 30026 Lansing, MI 48909	**$40,000,000**	Prisons accounted for 75 percent of this agency's construction, followed by educational facilities (15 percent) and offices (10 percent). Two new prisons totaling $89 million are underway in Saginaw and Macomb Counties.
Virginia Department of General Services 203 Governor St. Richmond, VA 23219	**$30,000,000**	Construction involved office buildings (80 percent) and labs/research facilities (20 percent). Among current projects are two new office buildings and renovations to two others, all located in Richmond. Reconstruction/renovation accounted for 80 percent of construction expenditures, which are expected to increase to $50 million in the current fiscal year.

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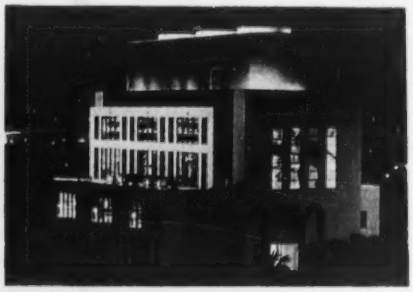

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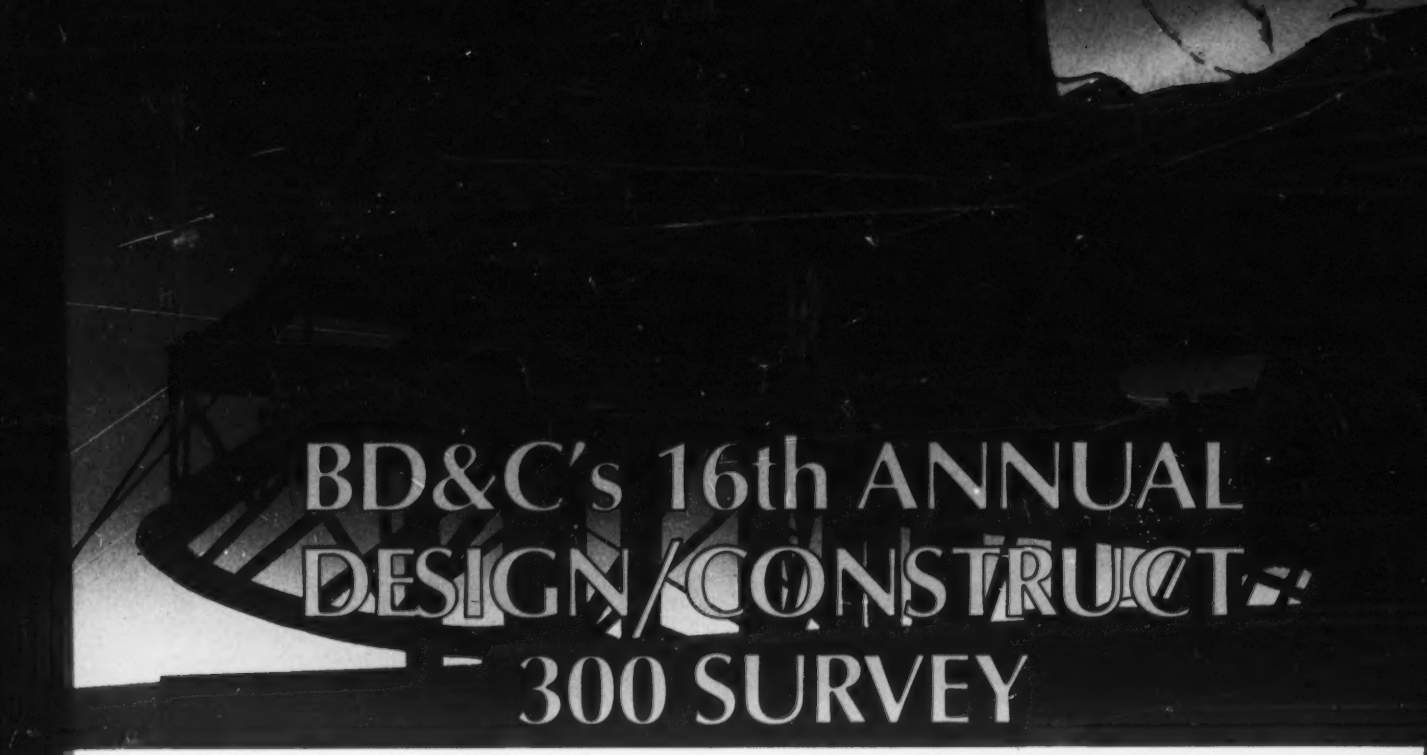


BD&C's 16th ANNUAL DESIGN/CONSTRUCT-300 SURVEY

Firms look to capitalize on niche opportunities; despite rising competition, industry is more upbeat than a year ago

By Christopher Olson, Managing Editor

This year's Design/Construct 300 survey provides still more evidence that 1991 was a year when many design and construction firms found that they needed a high-powered rifle with a telescopic sight — i.e., niche marketing — to hit any business targets. Many of those armed only with shotguns, and those who tried to flush out targets on some old hunting grounds, hit a lot of thin air.

The survey reports on the commercial, industrial and institutional (C.I.I.) buildings work in the United States by a total of 300 firms divided into seven categories: Architects (50 members), Architect/Engineers (60), Engineer/Architects (50), Engineers (40), Contractors (70), Construction Managers (10) and Specialty Contractors (20). The volume of work reported by the firms in each category is based on bricks and mortar rather than on contract awards: that is, the firms are asked to report either the value of construction actually put in place last year or the value of their billings from design and planning. (See the description of the survey's methodology.)

Most categories reported either flat revenues or small declines for 1991 (see table). The Architects, however, registered the greatest margin of change with a 13.7 percent decline, followed by the Specialty Contractors with a 10.8 percent decline. Despite these frail results, most firms in the survey generally eluded the steeper decrease nationwide in C.I.I. construction spending, which fell 10.9 percent in current dollars during 1991, according to Cahners Economics.

It should also be noted that many firms in the survey did not see their *total* revenues suffer even if their C.I.I. work declined. Environmental engineering, civil projects, utilities and waste treatment work made significant contributions to the bottom lines of many firms, particularly some of those in the Engineers and the Engineer/Architects categories.

In some previous years, inflation has been a significant factor that diminished apparent revenue gains among the Design/Construct 300 firms, but this was not the case in 1991. The Department of Commerce's inflation index for construction — which is less than the inflation factor applied to the Consumer Price Index — was just 0.6 percent for last year. (The construction inflation index takes into account the cost of both labor and materials.)

Percent Change in Revenues from C.I.I. Building Projects (1990-1991)

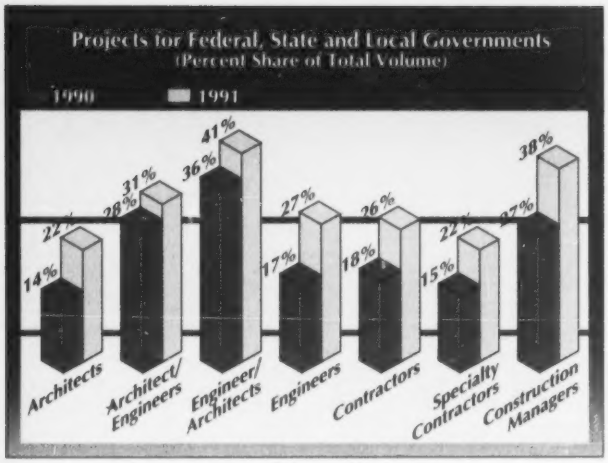
Architects	−13.7%
Architect/Engineers	+0.8%
Engineer/Architects	−0.5%
Engineers	−3.2%
Specialty Contractors	−10.8%
Construction Managers	−5.6%

Scrambling away from the commercial sinkhole

The survey results supplied further proof — though it was scarcely needed — that the commercial market stank in 1991 and the last ones out of it (i.e., the Architects) were rotten eggs.

As a slice of the revenue pie, the commercial building market shrank across all the survey categories, with the declines ranging from 2 percent to 11 percent for 1991. The Architects, who traditionally have reported the largest relative share of work in this market, had the most to lose — and they did. For this group, commercial projects represented 59 percent of all work in 1990 but just 48 percent in 1991.

As one would expect, there was a kind of teeter-totter relationship between commercial and institutional work, with declining commercial projects being offset by a consistently proportional increase in institutional projects for each cate-



***The comparative strength of the institutional market** was reflected by increases in the share of work devoted to buildings for federal, state and local governments.*

gory in the survey. The Architects, for example, reported that institutional work — which, for the purposes of the survey, includes health care, criminal justice, airport and governmental buildings — rose from a 35 percent share of their work in 1990 to a 45 percent share in 1991. Similarly, the Architect/Engineers, whose commercial work fell a marginal 2 percent, reported a collective 1 percent increase in institutional work.

Firms already entrenched in the institutional market tended to fare better in 1991. In the 50-member Architects category, for example, nine of the 10 firms who reported increases in billings for 1991 also reported that institutional projects were the single-largest share of their work. The comparative strength of health care, in particular, was singled out by a number of Architects and Architect/Engineers this year. But the cat has been out of this bag for a long time, and some respondents also noted that the convergence of more and more firms on this market — including those who have not been traditional players — escalated competition and created additional pressures to reduce fees.

The Design/Construct 300 firms also disclosed a broad increase in reconstruction projects in 1991. The Specialty Contractors and the Engineers both reported 8 percent increases, resulting in reconstruction totals of 32 percent and 38 percent respectively. Smaller increases of 7 and 4 percent were reported by the Engineer/Architects and the Architect/Engineers, bringing their totals to 36 percent and 29 percent respectively. Some reconstruction projects, as well as a good deal of new construction, were stimulated by the recessionary economy, which prompted many corporations to consolidate their facilities.

Given the difficult economy, some design and construction firms not only looked outward for new markets but also inward to re-examine their strengths and services. A growing number of firms, particularly in the Engineer/Architects category, reported development of total quality management programs during the past year. Wolfberg/Alvarez & Associates, a Miami-based Architect/Engineer with a bilingual staff, is focusing on U.S. corporations that are planning projects in Puerto Rico and South and Central America.

For those who like their business forecasts sunny-side up, this year's survey was a bit more accommodating than last year's. When asked whether revenues would be up, down or the same in 1992, respondents edged more toward the positive than they had last year. For example, 10 percent more of the firms in the Architects and Architect/Engineers category reported that they expect revenues to increase in the current year, as did 4 percent more of the Specialty Contractors and 3 percent of the Architect/Engineers. Perhaps more telling is the fact that fewer firms this year are expecting revenues to *decrease*: 16 percent fewer of the Architects, 13 percent fewer of the Engineers, 7 percent fewer of the Specialty Contractors and 2 percent fewer of the Engineer/Architects and Engineers.

While responses to this survey question have always been a poor indicator of actual results the following year, they still have pointed to a general perception of the industry's wax and wane. The responses this year suggest that a growing number of firms believe that they've finally touched their toes on the bottom — and that is good news. □

How the Design/Construct 300 survey is compiled

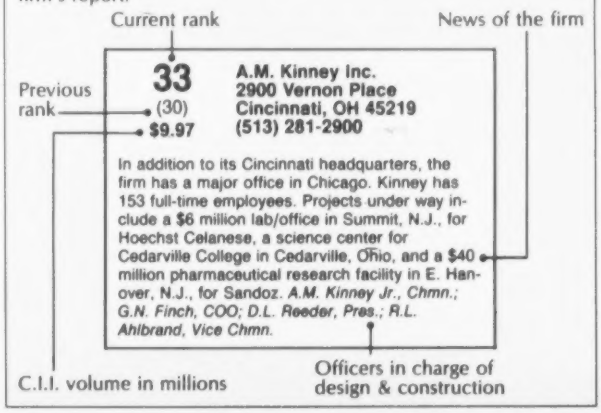
BD&C's Design/Construct 300 consists of the firms that designed and/or constructed the largest volumes of commercial, institutional and industrial (C.I.I.) buildings in the United States during 1991. These 300 firms are divided into seven categories: Architects (50 members), Architect/Engineers (60), Engineer/Architects (50), Engineers (40), Contractors (70), Construction Managers (10) and Specialty Contractors (20).

Design firms are ranked on the basis of billings for design and planning performed by their own employees during 1991 or their most recent fiscal year. Contractors are ranked on the dollar value of the construction which they put in place, and for which they were contractually responsible, during 1991. Construction managers are ranked on the dollar value of the construction that they managed during 1991. In the case of building projects lasting longer than one year, the firms were asked to report only that portion completed during the designated 12-month period. Firms may appear in more than one category if the volume of their work in more than one discipline was great enough to qualify them.

To compile the data presented in the survey, *BD&C* mails a questionnaire each year to approximately 1,200 firms. In cases where *BD&C* was unable to obtain a response to the questionnaire, C.I.I. revenues may have been estimated. Any such estimates are noted in the individual report given for each firm in the survey.

Please note that any revenues unrelated to C.I.I. buildings in the U.S. have been excluded from the figures used for ranking purposes in this survey. Thus every effort has been made to subtract revenues derived from roads, dams, bridges, utility plants, water and waste treatment plants, refineries and single-family housing. Firms were also asked to exclude any pass-through billings for work done by outside consultants, as well as any revenues from projects located outside the U.S.

The sample below highlights the information provided in each firm's report.


Current rank
News of the firm
Previous rank
33
(30)
$9.97
A.M. Kinney Inc.
2900 Vernon Place
Cincinnati, OH 45219
(513) 281-2900
In addition to its Cincinnati headquarters, the firm has a major office in Chicago. Kinney has 153 full-time employees. Projects under way include a $6 million lab/office in Summit, N.J., for Hoechst Celanese, a science center for Cedarville College in Cedarville, Ohio, and a $40 million pharmaceutical research facility in E. Hanover, N.J., for Sandoz. A.M. Kinney Jr., Chmn.; G.N. Finch, COO; D.L. Reeder, Pres.; R.L. Ahlbrand, Vice Chmn.
C.I.I. volume in millions
Officers in charge of design & construction

ARCHITECTS

INSTITUTIONAL WORK INCREASES; COMMERCIAL WORK DECLINES DRAMATICALLY

While firms emphasizing institutional projects showed the most growth last year, competition for such work is becoming keener

1
(1)
$68.34

Gensler & Associates/ Architects
550 Kearny St.
San Francisco, CA 94108
(415) 433-3700

Commercial projects comprised all but 7 percent of Gensler's C.I.I. billings last year. Twenty percent of its work involved corporate facilities and 15 percent involved reconstruction. Firm continues to place more emphasis on international interior architectural work. Its staff of 622 includes 132 registered architects. *M. Arthur Gensler Jr., Pres.*

2
(2)
$38.90

NBBJ
55 Nationwide Blvd.
Columbus, OH 43215
(614) 224-7145

NBBJ's services range from site and facilities planning and architectural design to cost management, interior design and cost management. Firm brings a regional approach to health care, education, criminal justice, retail and office projects. Thirty percent of its work last year was government-related, while 15 percent involved reconstruction. *Friedrich K.M. Bohm, Managing Ptnr.*

3
(3)
$35.48

Kohn Pedersen Fox Associates
111 W. 57th St.
New York, NY 10019
(212) 977-6500

KPF has increased its work in Europe and the Far East, with foreign projects accounting for 20 percent of its total revenues last year. Commercial projects accounted for 75 percent of its work and institutional projects accounted for 20 percent. Recent projects include the National Bank of Poland in Warsaw and the Foley Square Courthouse in New York City. *A.E. Kohn, Pres.; Sheldon Fox, William Pedersen, Ptnrs.*

4
(5)
$25.00

The Callison Partnership Ltd.
1420 Fifth Ave.
Seattle, WA 98101
(206) 623-4646

Although the majority of Callison's work involves commercial projects, the firm has experienced growth in public-sector markets. Educational facilities are a firm specialty. More than half of its work involved corporate facilities last year; 45 percent involved reconstruction. Its staff of 250 includes 90 registered architects and 40 interior designers. *Gerry Gerron, David Olson, Managing Prins.*

5
(4)
$18.00

The Hillier Group
500 Alexander Park
CN-23
Princeton, NJ 08543-0023
(609) 452-8888

Hillier also has an office in Philadelphia. Sixty percent of its work was commercial, 20 percent institutional and 15 percent industrial for calendar 1991. Firm continues to emphasize a variety of project types, including educational, R&D, health care and corporate facilities. Current projects include American Home Products' 450,000-sq.-ft. corporate headquarters in Madison, N.J. *J. Robert Hillier, CEO*

6
(9)
$18.00

Kaplan/McLaughlin/Diaz
222 Vallejo St.
San Francisco, CA 94111
(415) 398-5191

Billings estimated by *BD&C*. KMD also has offices in Portland, Ore., Los Angeles, Seattle and Tokyo. Ten percent of its work last year involved projects outside the U.S. Firm is placing more emphasis on government and institutional work and less on private development. Recently completed projects include Two Rodeo Drive, a 107,000-sq.-ft. retail center in Beverly Hills, Calif. *Herbert McLaughlin, Chmn.; Roy Latka, Pres.*

7
(8)
$17.80

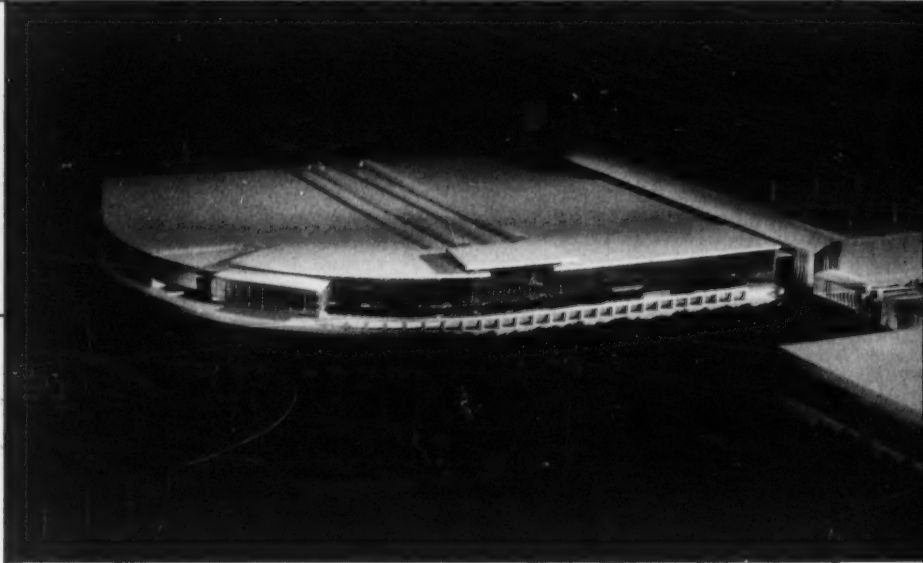
Thompson, Ventulett, Stainback & Associates
1230 Peachtree St. N.E.
Suite 2700
Atlanta, GA 30309
(404) 688-5831

TVS&A's work was almost evenly divided between commercial and institutional projects during calendar 1991. Twenty-five percent of its work involved interiors, while 20 percent involved reconstruction. Current work includes convention centers in Salt Lake City, Chicago and Long Beach, Calif. Firm expects revenues to remain the same in 1992. *W.P. Thompson Jr., Pres.*

8
(—)
$16.50

Pei Cobb Freed & Partners
600 Madison Ave.
New York, NY 10022
(212) 751-3122

Firm's revenues for calendar 1991 totaled $29.4 million, 33 percent of which was derived from projects outside the U.S. Its work was evenly split between commercial and institutional projects. Corporate and investment buildings are among firm's specialties. Current projects include the $50 million United States Holocaust Memorial Museum in Washington, D.C. Firm's staff of 212 includes 144 registered architects. *Henry N. Cobb, Ptnr.*



The $675 million expansion *of Chicago's McCormick Place convention center is a current project of Thompson, Ventulett, Stainback & Assoc.* Photo: James Steinkamp

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ARCHITECTS

9 (18) $15.40
HMC Group
3270 Inland Empire Blvd.
Ontario, CA 91764
(714) 989-9979

HMC recently moved to a new headquarters, consolidating several of its California offices under one roof. Almost all of its work was institutional for fiscal year ending January 1992. Firm emphasizes health care, government, commercial and educational facilities. Current projects include a 6 million-sq.-ft. mental health facility in Upland, Calif. Firm expects revenues to rise by 10 percent this year. *James D. Chase, Pres.; Walter L. Siegl, Exec. VP*

10 (7) $15.20
Swanke Hayden Connell Architects
4 Columbus Circle
New York, NY 10019
(212) 977-9696

As part of SHC's continuing expansion overseas, firm has established offices in Istanbul, Turkey; Caracas, Venezuela; and Berlin. Foreign projects, excluded from the dollar figure above, accounted for 35 percent of its work during calendar 1991. Eighty percent of its U.S. work involved commercial projects, while 10 percent involved institutional. Half of its work involved interiors. *Richard S. Hayden, Managing Prin.*

Payette Associates designed the George E. Fuller Laboratories at Worcester Polytechnic Institute in Worcester, Mass. Photo: Paul Ferrino

11 (12) $14.00
The Nadel Partnership
1990 S. Bundy, 4th Floor
Los Angeles, CA 90025
(213) 826-2100

Nadel opened a branch office in San Diego. Although best known for speculative office and retail development, firm is currently emphasizing public work, including schools and prisons. Sixty percent of its work involved corporate facilities last year, while 30 percent involved reconstruction. Its staff of 160 includes 48 registered architects. *Herbert Nadel, Pres.*

14 (15) $12.60
Payette Associates Inc.
285 Summer St.
Boston, MA 02210
(617) 342-8200

PAI emphasizes technically sophisticated buildings, such as research facilities for hospitals, universities and corporations. Institutional projects accounted for 75 percent of firm's activity last year, while industrial projects made up the balance. Nearly one-third of its work involved reconstruction. Firm expects revenues to rise this year. *Thomas M. Payette, Pres.*

17 (28) $11.00
Hayes Large Architects
Logan Blvd. & Fifth St.
P.O. Box 1784
Altoona, PA 16603
(814) 946-0451

Firm's staff of 137 includes 42 registered architects. It continues to focus on corporate, educational and health care markets. Sixty percent of firm's work involved reconstruction during calendar 1991; 85 percent involved institutional projects. Recent projects include a $6 million community arts center for Pennsylvania College of Technology in Williamsport. *J. Richard Fruth, Robert Wedge, Ptnrs.*

12 (10) $13.30
Wimberly, Allison Tong & Goo
2222 Kalakaua Ave.
Honolulu, HI 96815
(808) 922-1253

WATG's revenues for calendar 1991 totaled $31.9 million, 40 percent of which was derived from projects outside the U.S. Firm continues to specialize almost exclusively in hotel and resort design. Recent projects include a 520-room Disneyland Hotel in Marne-La-Vallee, France for Euro Disneyland Corp. Firm expects revenues to decline in 1992. *Donald W.Y. Goo, Pres., CEO*

15 (23) $12.00
Rochlin Baran & Balbona Inc.
10960 Wilshire Blvd.
Los Angeles, CA 90024
(213) 473-3555

Firm emphasizes institutional work, particularly health care and research projects. Much of its work continues to involve reconstruction. Current projects include the East Canyon Health Center, a three-story medical office building in Anaheim, Calif. Firm expects revenues to remain the same this year. *Joseph A. Balbona, CEO*

18 (31) $11.00
Shepley Bulfinch Richardson and Abbott Inc.
40 Broad St.
Boston, MA 02109
(617) 423-1700

SBRA's backlog of work remains strong, particularly in the health care field. Firm also emphasizes libraries, museums and educational facilities. Sixty percent of work was institutional last year, while commercial projects made up the balance. Current projects include a new $85 million facility for Rush Presbyterian-St. Lukes Medical Center in Chicago. *George R. Mathey, Pres.*

13 (21) $12.63
Zimmer Gunsul Frasca Partnership
320 S.W. Oak, Suite 500
Portland, OR 97204
(503) 224-3860

Thirty-five percent of ZGFP's work for calendar 1991 involved corporate facilities, while another 35 percent involved government projects. University, health care and high-tech industrial projects are among firm's specialties. Firm performed master planning and programming for 1 million square feet of new facilities for the Fred Hutchinson Cancer Research Center in Seattle. *Robert G. Packard, Managing Ptnr.*

16 (13) $11.11
Stone Marraccini Patterson
One Market Plaza
Spear Street Tower
San Francisco, CA 94105
(415) 227-0100

SMP has offices in St. Louis and Santa Monica, Calif., and is best-known for health care, academic and corporate facilities. Institutional projects accounted for 70 percent of its work last year. Current projects include a 100,000-sq.-ft. poultry research center for the University of Arkansas, Fayetteville. *Michael D. Kelly, Pres.*

19 (37) $10.50
TRO/The Ritchie Organization
80 Bridge St.
Newton, MA 02158
(617) 969-9400

TRO is dedicated exclusively to health care facility planning and design. The firm recently launched a new regional office in San Francisco, known as TRO/Brown & Partners. TRO also has offices in Birmingham, Ala., and Sarasota, Fla. Forty percent of its work involved reconstruction during its last fiscal year. It expects revenues to rise this year. *Wendell R. Morgan Jr., Pres.*

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20 (17) $10.31

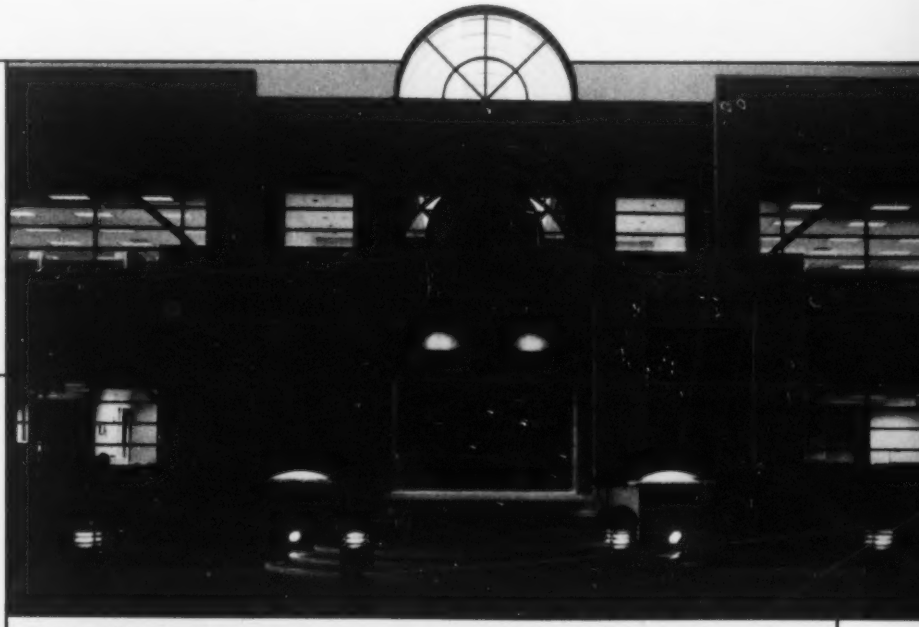
Ehrlich-Rominger Architects
4800 El Camino Real
Los Altos, CA 94022
(415) 949-1300

Firm has regional offices in San Francisco, Sacramento and Newport Beach, Calif. Its specialties include R&D labs, manufacturing facilities, data centers, clean rooms and corporate headquarters. Industrial facilities accounted for the majority of its work last year. Thirty-five percent of its work involved reconstruction. *Joseph Ehrlich, CEO; Robert Cavigli, Pres.*

21 (26) $9.97

Brennan Beer Gorman/ Architects
515 Madison Ave.
New York, NY 10022
(212) 888-7663

BBG continues to specialize in renovation/retrofit projects, which accounted for 75 percent of its work last year. Firm is also known for hotels, office buildings, retail centers and residential facilities. Recent projects include the renovation of Essex House, a 41-story hotel in New York City. Firm has offices in Washington, D.C., Atlanta and Hong Kong. *Henry Brennan, David Beer, Peter Gorman, Ptnrs.*



Puritan-Bennett's new corporate campus *in Carlsbad, Calif., was designed by Ehrlich-Rominger.* Photo: Dwight Vallely

22 (36) $9.69

Loebl Schlossman & Hackl
130 E. Randolph
Suite 3400
Chicago, IL 60601
(312) 565-1800

LS&H's staff of 120 includes 54 registered architects. Firm continues to emphasize architecture and interior design for a broad range of building types, including office, retail, mixed-use, educational and residential facilities. Thirty percent of its work involved reconstruction last year. Current projects include the 60,000-sq.-ft. United Cerebral Palsy Assistive Technology Application Center in Chicago. *Donald J. Hackl, Pres.*

25 (—) $8.88

BWBR Architects
400 Sibley St.
Suite 500
St. Paul, MN 55101
(612) 222-3701

BWBR specializes in health care, educational and correctional facilities. Its percentage of revenue derived from health care projects has increased as other markets have become less active. Institutional projects accounted for 90 percent of its work during calendar 1991. Forty percent of its work involved reconstruction. Staff of 106 includes 51 registered architects. *Fritz C. Rohkohl, Pres., CEO*

27 (—) $8.70

Space Design International
311 Elm St
Cincinnati, OH 45202
(513) 241-3000

SDI also has offices in New York City and Los Angeles. Firm specializes in retail projects, including shopping centers, department stores and specialty stores. Eighty percent of its work involved interior architecture/design last year; 65 percent involved reconstruction. Recent projects include the $110 million renovation of Marshall Field's department store in Chicago. *James Fitzgerald, Pres.; Kevin Roche, Exec. VP*

23 (16) $9.57

Smallwood, Reynolds Stewart, Stewart & Assoc.
1 Piedmont Center, Suite 303
3565 Piedmont Road, NE
Atlanta, GA 30305
(404) 233-5453

SRSS&A is focusing more on corporate facilities, though it is also known for hotel, retail and high-rise residential projects. Commercial projects accounted for 85 percent of its billings last year. Twenty percent of firm's work involved interiors. Current projects include a 630,000-sq.-ft. Ritz-Carlton Hotel in Orlando, Fla. *William D. Reynolds, Howard H. Stewart, Prins.*

26 (30) $8.81

Gruen Associates
6330 San Vicente Blvd.
Los Angeles, CA 90048
(213) 937-4270

The bulk of Gruen's work last year involved commercial projects. Current projects include the 250-room Royal Garden Hotel in Los Angeles; a $40 million, 400,000-sq.-ft. shopping center in Monterey Park, Calif; and a pair of 27-story office towers in Indonesia. Firm expects revenues to remain the same this year. *Ki Suh Park, Managing Ptnr.*

28 (46) $8.61

KKE Architects Inc.
300 First Ave., N., Suite 500
Minneapolis, MN 55401
(612) 339-4200

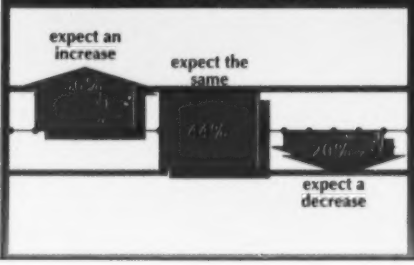
KKE continues to emphasize retail, government, educational and elderly care facilities. Work was evenly split between commercial and institutional projects during calendar 1991. A current project is Mall of America, a 4.2 million-sq.-ft. facility in Bloomington, Minn., that will be the largest enclosed shopping center in the U.S. *Ronald Krank, Pres.*

24 (24) $9.08

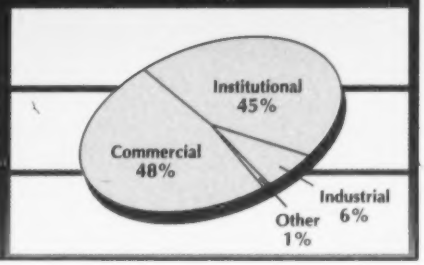
The Spector Group
3111 New Hyde Park Road
North Hills, NY 11040
(516) 365-4240

Firm continues to expand geographically, developing new clientele and projects in Los Angeles, San Francisco, Atlanta and Dallas. Corporate facilities accounted for 85 percent of its work last year. Thirty percent of its work involved interiors. Current projects include a 500,000-sq.-ft. R&D/ sales/distribution center for Sony Corp. America in San Jose, Calif. *Michael H. Spector, Ptnr.*

What is the Architects' Outlook for Revenues in 1992?



Breakdown of the Architects' Billings



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ARCHITECTS

Forty-seven of the top 50 firms engaged in reconstruction in 1991; 35 performed public work; and 20 were involved in foreign work

29 (32) $8.57
LPA Inc.
1 Venture, Suite 300
Irvine, CA 92718
(714) 753-1001

LPA's staff of 102 includes 46 registered architects. Thirty percent of its work involved corporate facilities and another 30 percent was government-related. Recent projects include Media City, a 2 million-sq.-ft. mixed-use project in Burbank, Calif., and a 270,000-sq.-ft. corporate headquarters for Mazda in Irvine, Calif. Firm expects revenues to decline by 10 percent this year. *Leason F. Pomeroy III, Pres.*

30 (35) $8.50
Corgan Architects Inc.
508 Elm St., Suite 500
Dallas, TX 75202
(214) 748-2000

Corgan also has an office in Fort Worth, Texas. Commercial projects accounted for 75 percent of its work last year, while institutional projects made up the balance. Twenty percent of its work involved interiors. Recent projects include a headquarters expansion for Central & South West Corp. in Dallas and the expansion and renovation of an American Airlines terminal at Dallas/Fort Worth Airport. *C. Jack Corgan, Prin.*

31 (41) $8.40
Griswold, Heckel & Kelly Assoc. Inc.
55 W. Wacker Drive
Chicago, IL 60601
(312) 263-6605

Firm continues to specialize in interior architecture, corporate relocation and renovation, master planning and facilities management. Commercial projects accounted for all of its work last year. Recent projects include a 250,000-sq.-ft. renovation for Continental Bank in Chicago and a 400,000-sq.-ft. office renovation for Sterling Winthrop in New York City. *Curt Zeiser, Pres.*

32 (34) $8.20
Musil Perkowitz Ruth Inc.
911 Studebaker Road
Long Beach, CA 90815
(213) 594-9333

Firm has consolidated and downsized its operations in Long Beach and opened a new office in Sacramento. Firm continues to specialize in retail, though industrial projects accounted for 5 percent of its work last year. Recent projects include Central Valley Plaza, a 559,000-sq.-ft. retail center in Modesto, Calif. *M. Lawrence Musil, Pres.*

33 (33) $8.00
Lohan Associates
225 N. Michigan Ave.
Suite 800
Chicago, IL 60601
(312) 938-4455

Lohan's staff of 83 includes 35 registered architects. Seventy percent of its work was commercial and 30 percent was institutional during calendar 1991. Firm is known for its planning and design of cultural facilities, corporate campuses, residential buildings and public open spaces. Recent projects include the 175,000-sq.-ft. Oceanarium at the John G. Shedd Aquarium in Chicago. *Dirk Lohan, CEO, Prin.*

34 (—) $8.00
Medifac
411 N. 20th St.
Philadelphia, PA 19130
(215) 665-7000

Medifac specializes in health care facility design, planning, project management and interior design. Fifty percent of its work involved reconstruction last year. Recent projects include the expansion of a 212,800-sq.-ft. community medical center in Toms River, N.J., and the 111,500-sq.-ft. expansion and renovation of the Atlantic City Medical Center in Pomona, N.J. *James Eastwood, Pres.*

35 (11) $7.74
The Stubbins Assoc. Inc.
1033 Massachusetts Ave.
Cambridge, MA 02138
(617) 491-6450

Firm's revenues totaled $11.7 million last year, 11 percent of which was derived from projects outside the U.S. The firm continues to design projects for a repeat corporate client base. It has also capitalized on the resurgence of educational and laboratory markets in the U.S. Recent projects include the 153,000-sq.-ft. Ronald Reagan Presidential Library in Simi Valley, Calif. *Hugh Stubbins, Chmn.; Richard Green, Pres.*

36 (44) $7.69
Nix Mann and Associates Inc., Architects
1382 Peachtree St., N.E.
Atlanta, GA 30309
(404) 873-2300

NM&A's staff of 72 includes 41 registered architects. Firm continues to specialize in the the planning and design of health care facilities. Sixty percent of its work involved reconstruction last year and 22 percent was government-related. Recent projects include the $30 million expansion and renovation of St. Joseph's Hospital in Atlanta. Firm expects its revenues to rise this year. *Henry A. Mann, Chmn; I. Lewis Nix, Pres.*

37 (—) $7.41
Karlsberger Companies
99 E. Main St.
Columbus, OH 43215
(614) 461-9500

Firm has three design subsidiaries in Columbus and another in New York City. It provides a variety of services, including planning, programming and architectural design, for health care, criminal justice, educational and corporate clients. Firm recently opened an office in St. Petersburg, Fla. Recent projects include an 800-bed floating detention facility for New York City's Department of Corrections. *Michael D. Tyne, Pres., CEO*

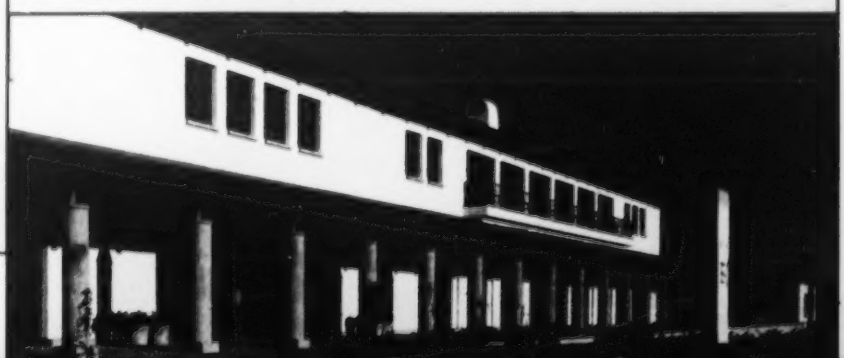
38 (29) $7.40
The Luckman Partnership
9220 Sunset Blvd.
Los Angeles, CA 90069
(310) 274-7755

Seventy percent of firm's work involved institutional projects during calendar 1991. Renovation remains a strong market for the firm, accounting for half of its work last year. Recent projects include a 370,000-sq.-ft. headquarters for Health Net Insurance in Thousand Oaks, Calif. *James Luckman, Sr. Ptnr.; Fred Yerou, Managing Ptnr.*

39 (—) $7.28
Group 70 International
924 Bethel St.
Honolulu, HI 96813
(808) 523-5866

Group 70 also has an office in the Philippines. Foreign projects accounted for 7 percent of its revenues last year. Firm emphasizes the design of resorts and hotels, retail and mixed-use facilities, and residential high-rises. Its staff of 105 includes 46 registered architects. *Francis S. Oda, Chmn.; Sheryl B. Seaman, Pres.*

***Stubbins Associates designed** the 153,000-sq.-ft. Ronald Reagan Presidential Library in Simi Valley, Calif.* Photo: Ed Jacoby



40
(22)
$7.10

Keeva J. Kekst Architects Inc.
1468 W. 9th St., Suite 600
Cleveland, OH 44113
(216) 781-9144

Kekst also has an office in Santa Monica, Calif. Commercial projects accounted for the bulk of firm's activity during its last fiscal year. Almost one-third of its work involved reconstruction. Firm specializes in regional malls, mixed-use facilities, office buildings, hotels and multifamily housing. Recent projects include the renovation of Lloyd Center, a 1.5 million-sq.-ft. mall in Portland, Ore. *Keeva J. Kekst, Pres.*

41
(—)
$6.74

Hardy Holzman Pfeiffer Assoc.
902 Broadway
New York, NY 10010
(212) 677-6030

Firm also has an office in Los Angeles. Its specialties include libraries, college and university buildings, museums, performing arts centers and theaters. Current projects include the $130 million expansion and rehabilitation of the Los Angeles Public Library. Firm expects revenues to remain the same this year. Its staff of 75 includes 47 registered architects. *Hugh Hardy, Malcolm Holzman, Ptnrs.*

The 875,000-sq.-ft. San Bernardino (Calif.) Replacement Medical Center is a current project of Bobrow/Thomas and Associates.

42
(40)
$6.40

Walker Group/CNI Inc.
320 W. 13th St.
New York, NY 10014
(212) 206-0444

Walker recently opened an office in Singapore. Foreign projects, excluded from the dollar figure above, accounted for half of its workload last year. All of its work involved commercial projects. Firm continues to specialize in interior architecture/design. Recent work includes several retail projects in Indonesia. *Kenneth H. Walker, Chmn., CEO; Mark Pucci, Pres.*

45
(20)
$6.09

Jung/Brannen Associates Inc.
177 Milk St.
Boston, MA 02109
(617) 482-2299

Jung/Brannen also has offices in New York City and Hartford, Conn. It emphasizes architecture, interior design, programming and master planning for a variety of building types, including educational, R&D and residential facilities. Fifty percent of its work involved reconstruction last year; 40 percent involved corporate facilities. *Yu Sing Jung, Pres.; Robert Brannen, Chmn.*

48
(42)
$6.00

SGPA Architecture and Planning
1565 Hotel Circle South
San Diego, CA 92108
(619) 297-0131

SGPA also has offices in San Francisco and Irvine, Calif., and is best-known for retail projects, especially shopping centers. Twenty percent of its work last year involved reconstruction. Recent projects include the Garner Galleria, a $10 million mixed-use center in San Diego. *Arthur D. Allard, CEO; Lawrence V. Haswell, CFO*

43
(45)
$6.29

Langdon Wilson Architecture Planning
1055 Wilshire Blvd.
Los Angeles, CA 90017
(213) 250-1186

Institutional work accounted for 40 percent of LWAP's billings last year, up from 25 percent in 1990. Its specialties include office buildings, health care facilities, schools, museums and hotels. Firm is placing more emphasis on foreign work and is currently working on projects in Spain, Mexico, South Korea and China. *Ernest C. Wilson, Sr. Ptnr.*

46
(—)
$6.00)

Lendrum Associates
3820 N. Third St.
Phoenix, AZ 85012
(602) 266-2100

During 1991, Lendrum focused its efforts on industrial and corporate work, offering an expanded list of services, including facilities management, to help clients improve the efficiency of their operations. Firm specializes in microelectronics facilities, clean rooms, assembly test facilities and financial offices. *Peter A. Lendrum, Pres.*

49
(14)
$5.97

The Architects Collaborative Inc. (TAC)
46 Brattle St.
Cambridge, MA 02138
(617) 868-4200

TAC's revenues totaled $14.9 million last year, 26 percent of which was derived from projects outside the U.S. Institutional projects accounted for 63 percent of its work in the U.S., while commercial projects made up the balance. Recent projects include a 254-bed replacement facility for Norfolk County Jail in Dedham, Mass. Firm also has an office in San Francisco. *Perry King Neubauer, Pres.*

44
(—)
$6.23

Bobrow/Thomas & Assoc.
1001 Westwood Blvd.
Los Angeles, CA 90024
(310) 208-7017

BT&A's work was 100 percent institutional last year. Firm emphasizes design of health care, elderly care and mixed-use facilities. Current projects include a $10.1 million, 72,000-sq.-ft. psychiatry and academic/clinic building for Stanford University. Firm's staff of 75 includes 19 registered architects. *Michael Bobrow, Chmn.; Julia Thomas, Pres.*

47
(39)
$6.00

Morris Architects
3355 W. Alabama, Suite 200
Houston, TX
(713) 622-1180

Fifty percent of Morris' work was government related last year. Forty percent involved commercial projects. Recent projects include the $28 million North Carolina Performing Arts Center in Charlotte and the $60 million expansion of Harris County Jail in Houston. Firm expects revenues to decline this year. *John H. Wiegman, Pres.*

50
(50)
$5.80

The Falick/Klein Partnership Inc.
5847 San Felipe, Suite 1900
Houston, TX 77057-3093
(713) 782-9000

FKP consolidated its Oakland and Irvine, Calif., offices into a new office in San Francisco. Firm remains known for the master planning and design of academic medical centers and community hospitals. Fifty percent of its work involved reconstruction last year. Firm expects revenues to rise this year. *James Falick, Chmn., CEO; John S. Crane, Pres., COO*

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ARCHITECT/ ENGINEERS

BILLINGS FOR THE ARCHITECT/ENGINEERS RISE 1 PERCENT

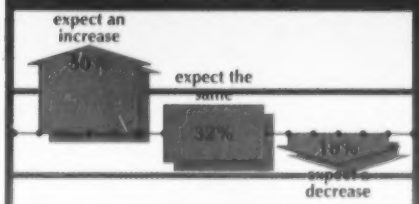
Half the firms anticipate an increase for the current year, while 32 percent expect billings to remain the same

1 (2) **$80.22**

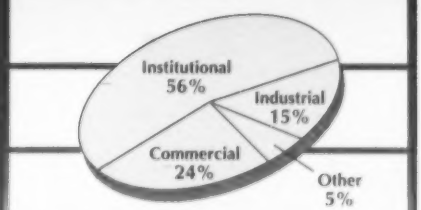
Ellerbe Becket Inc.
800 LaSalle Ave.
Minneapolis, MN 55402
(612) 376-2000

Ellerbe Becket recently completed LaSalle Plaza, a $130 million office, retail and entertainment complex where the firm's headquarters is now located. The staff of the employee-owned firm totals 920. Other office locations include Washington, D.C., Los Angeles, New York and Tokyo. *John C. Gaunt, CEO*

What is the Architect/Engineers' Outlook for Revenues in 1992?



Breakdown of the Architect/Engineers' Billings



2 (1) **$74.25**

Hellmuth, Obata & Kassabaum Inc.
1831 Chestnut St.
St. Louis, MO 63103
(314) 421-2000

Last year HOK opened a Tokyo office and formed associations with firms in London and Berlin. The firm also has offices in Kuwait and Hong Kong. Staff totals 924 and swells to 1,000 when part-time and temporary employees are included. *Gyo Obata, Chmn., CEO; Jerome Sincoff, Pres.; King Graf, Vice Chmn.*

5 (6) **$50.09**

The Smith Group
150 W. Jefferson Ave.
Detroit, MI 48226
(313) 983-3600

The Smith Group is the parent company of Smith, Hinchman & Grylls and its affiliates, which include Johnson, Johnson & Roy/Inc., Ann Arbor, Mich.; Moyer Associates Inc., Glencoe, Ill.; and NORR/SH&G Ltd., Toronto. Activity included 35 percent institutional, 35 percent commercial and 30 percent industrial. *Arnold Mikon, Pres.*

8 (7) **$36.13**

The Kling-Lindquist Partnership
2301 Chestnut St.
Philadelphia, PA 19103
(215) 569-2900

For the coming year, TKLP plans to place more emphasis on marketing its Consulting Services Division, a branch that provides facility operations management services. Activity included 78 percent industrial and 13 percent commercial. This year, the firm expects to complete a pharmaceutical R&D facility for Merck, Sharp & Dohme Research Laboratories in West Point, Pa. *M.J. Sotnick, Pres., CEO*

3 (5) **$57.27**

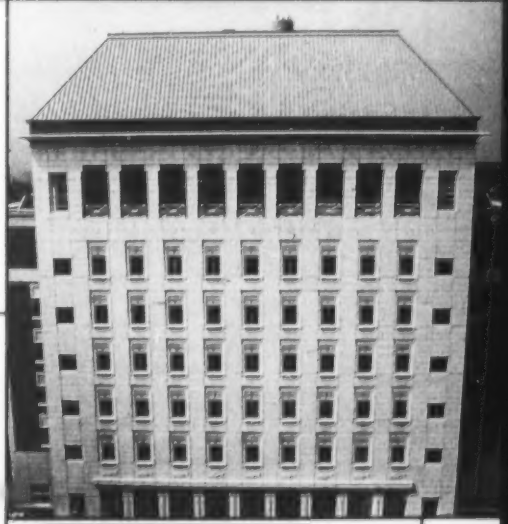
Leo A. Daly
8600 Indian Hills Drive
Omaha, NE 68114
(402) 391-8111

Firm acquired Lockwood Andrews Newnam Inc., a Texas A/E firm with offices in Houston, Dallas, Fort Worth, San Antonio and Austin. The firm has worked on several foreign projects, including the U.S. Embassy in La Paz, Bolivia, and the National Culture Center in Kaohsiung, Korea. Corporate facilities comprised 60 percent of activity. *Leo A. Daly, Chmn., Pres., CEO*

6 (3) **$48.50**

RTKL Associates Inc.
400 E. Pratt St.
Baltimore, MD 21202
(301) 528-8600

Additional offices are located in Washington D.C., Los Angeles, London and Tokyo. Activity was 85 percent commercial, 13 percent institutional and 2 percent industrial. Recent projects include Menlo Park, a 1.6 million-sq.-ft. mall in Edison Township, N.J., and the Manhattan, a 180-room hotel in Makuhari, Japan. *Harold L. Adams, Chmn.*



***HOK designed** the Columbia University Center for Engineering and Physical Science Research in New York City.*
Photo: Balthazar Korab

4 (4) **$51.84**

HKS Inc.
111 Plaza of the Americas
Dallas, TX 75201
(214) 969-5599

Staff totals 405 and includes 155 registered architects and nine registered structural engineers. Activity was 60 percent institutional and 40 percent commercial. Current projects include the UNC Medical Hospital in Chapel Hill, N.C., and the 674,000-sq.-ft. St. Vincent Hospital in Indianapolis. *Ronald L. Skaggs, Chmn., CEO; C. Joe Buskuhl, Pres.*

7 (9) **$36.74**

HDR Inc.
8404 Indian Hills Drive
Omaha, NE 68114
(402) 399-1000

Parent company is Bouygues of Saint-Quentin-eb-Yvelines, France. Dollar figure above excludes the approximately 70 percent of work involving highway and civil projects, municipal water and waste treatment plants and utility plants. HDR has increased the amount of international work it performs and currently has a project in Saudi Arabia. *Francis Jeiensperger, COO*

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ARCHITECT/ENGINEERS

9 (10) **$35.00**

Hansen Lind Meyer Inc.
Plaza Centre One
Iowa City, IA 52244
(319) 354-4700

Marketing emphasis includes health care, criminal justice, high-tech R&D and commercial office facilities. Institutional work accounted for 96 percent of activity. Staff totals 433. The $131 million Orange County Justice Complex in Orlando and the $150 million City Hospital Center at Elmhurst, N.Y., are two current projects. *James E. Zajac, Chmn. of Bd., Pres.*

10 (8) **$32.00**

Howard Needles Tammen & Bergendoff
P.O. Box 419299
Kansas City, MO 64141
(816) 333-4800

Staff totals 410. Other offices are located in Boston, Los Angeles and Seattle. Activity was 45 percent commercial, 45 percent institutional and 10 percent industrial. Several projects are slated for completion this year, including a $140 million renovation of the Los Angeles Memorial Coliseum, and a $109 million expansion at the Greater Rochester International Airport, Rochester, N.Y. *Cary Goodman, Richard Farnan, Ptnrs.*

11 (11) **$27.61**

Perkins & Will
123 N. Wacker Drive
Chicago, IL 60606
(312) 977-1100

Last year, the firm formed a subsidiary with a German architectural firm. Based in Berlin, the entity is known as JSK Perkins & Will International. Other offices are located in New York City, Washington, D.C., and London. The 1.1 million-sq.-ft. O'Hare International Terminal, Chicago, is a current project. Activity was 65 percent institutional and 35 percent commercial. *Robert P. Cooke, Chmn., CEO; James M. Stevenson, Pres., COO*

12 (16) **$27.36**

DLR Group Inc.
400 Essex Court
Regency Park
Omaha, NE 68114
(402) 393-4100

Among the firm's specialties are criminal justice facilities, educational buildings, retail centers and multifamily and elderly housing. Among its subsidiaries are John Graham Associates, Seattle, and Lescher and Mahoney, with offices in five different cities. Staff totals 239 and includes 74 registered architects. *Dale Hallock, Bryce Peersall, Managing Prins.*

13 (12) **$24.79**

Cannon
2710 Whitehaven Road
Grand Island, NY 14072
(716) 773-6800

Firm reports that it is pursuing more college and university laboratory work and has been marketing its health care design services in Canada. Activity was 68 percent institutional, 25 percent commercial and 7 percent industrial. Other offices are located in Boston, Washington, D.C., and St. Louis. *Gary R. Miller, CEO; Mark R. Mandell, Pres.*

14 (13) **$23.13**

Flad & Associates
6200 Mineral Point Road
Madison, WI 53705
(608) 238-2661

Parent company is Flad Affiliated Corp. Other offices are in Gainesville, Fla., and Greenwich, Conn. Firm continues to specialize in corporate facilities, health care and R&D-buildings. Activity included 40 percent industrial and 30 percent institutional. Corporate facilities comprised 85 percent of firm's work during the past year. *J.E. Blassick, J.W. Miller, R.H. Postweiler, Prins.*

15 (21) **$22.86**

Odell Associates
129 W. Trade St.
Charlotte, NC 28202
(704) 377-5941

Activity for this privately held firm includes 60 percent institutional, 20 percent commercial and 15 percent industrial. Projects for federal, state and local governments accounted for 30 percent of work. Firm is currently working on the Federal Prison Medical Center in Butner, N.C. A prototypical 500-bed center, the project will be finished in 1996. *Benjamin T. Rook, Chmn., CEO; Roy W. Johnson, Pres., COO*

16 (17) **$22.00**

Haines, Lundberg, Waehler (HLW)
115 Fifth Ave.
New York, NY 10003
(212) 353-4600

Activity was 60 percent industrial, with the remaining 40 percent divided evenly between commercial and institutional. Half of HLW's work involves corporate facilities, while 25 percent involves projects for government agencies. Firm recently completed an operations center in East Rutherford, N.J., for the Federal Reserve Bank of New York. *T.S. Hammer, L. Kill, M.D. Raab, R.A. Djerejian, Managing Ptnrs.*

17 (19) **$20.83**

Anderson DeBartolo Pan Inc.
2480 N. Arcadia Ave.
Tucson, AZ 85712
(602) 795-4500

Above dollar figure excludes 5 percent of activity that involved projects outside the U.S. Activity was 65 percent institutional, 34 percent industrial and 1 percent commercial. The $160 million Elmendorf AFB Hospital in Anchorage, Alaska, is a recent project. Other offices are located in Phoenix and San Francisco. *Richard Anderson, Jack DeBartolo, Solomon Pan, Ptnrs.*

18 (14) **$19.27**

Albert Kahn Associates Inc.
7430 Second Ave.
Detroit, MI 48202
(313) 871-6500

Staff totals 265 and includes 43 registered architects and 51 registered engineers. Activity was 63 percent industrial, 30 percent institutional and 7 percent commercial. A $150 million automotive assembly plant in Detroit, and a $31 million hospital addition and renovation in Ann Arbor, Mich., are current projects. *E.E. Parks, Pres., CEO*

HNTB designed the 30-story 1201 Walnut Building in Kansas City, Mo.

19 (15) **$19.00**

CUH2A
600 Alexander Road
Princeton, NJ 08543
(609) 452-1212

Among firm's specialties are research laboratories, computer facilities and office buildings. A 530,000-sq.-ft. drug discovery lab for Eli Lilly in Indianapolis, and 270,000 square feet of research labs at Washington University in St. Louis are current projects. Activity was 60 percent industrial, 25 percent institutional and 15 percent commercial. *Kurt M. Anderson, Pres.*

20 (24) **$19.00**

Sasaki Associates Inc.
64 Pleasant St.
Watertown, MA 02172
(617) 926-3300

Above figure excludes 18 percent of activity that involved projects outside the U.S. Firm reports that it is placing more emphasis on international work and resort development. Other offices are located in Dallas, Los Angeles and San Francisco. Last year, the firm completed the $25 million Brandeis Athletic complex in Waltham, Mass., and the $6.2 million Plymouth Public Library, Plymouth, Mass. *James Sukeforth, Pres.*

21 (22) **$16.84**

Ewing Cole Cherry Inc.
100 North 6th St.
Philadelphia, PA 19106-1590
(215) 923-2020

Subsidiaries include Ewing Cole Krause, sports facilities consultants, and Ewing Cole Brouwer, research and development facilities consultants. Another office is located in Haddonfield, N.J. Staff totals 211 and includes 59 registered architects and 20 registered engineers. *Robert V. Cherry, Chmn., CEO; J. Andrew Jarvis, Pres.*

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22 (25) $16.56

Spillis Candela & Partners Inc.
800 Douglas Entrance
Coral Gables, FL 33134
(305) 444-4691

Above dollar figure excludes the 5 percent of revenues that was derived from projects outside the U.S., as well as the 5 percent of activity that involved highway and civil projects. While recent economic trends forced the firm to reduce its number of employees, Spillis Candela expects to expand its staff this year. Other offices are located in Orlando and Washington, D.C. *Peter J. Spillis, Chmn.; Hilario Candela, Pres.*

The sharpest declines in billings were reported by the top 10 firms

30 (—) $13.80

McClier Corp.
401 E. Illinois St.
Suite #625
Chicago, IL 60611
(312) 836-7700

McClier is new to the listing this year. Firm also reported $16 million in design/build work. McClier focuses its activities in five specific markets, including aviation and aerospace, data centers, laboratories, and newspaper and printing facilities. Activity was 50 percent commercial, 30 percent industrial and 20 percent institutional. Staff totals 165. *Grant G. McCullagh, CEO*

23 (20) $15.50

Hammel Green and Abrahamson Inc.
1201 Harmon Place
Minneapolis, MN 55403
(612) 332-3944

This employee-owned firm opened a branch office in Rochester, Minn. Other offices are located in Denver and Milwaukee. Staff totals 220 and includes 73 registered architects and 21 registered engineers. Activity was 65 percent institutional, 20 percent industrial and 15 percent commercial. Firm anticipates a 10 percent increase in revenues this year. *Kurt Rogness, CEO; Roger Santelman, COO*

27 (37) $14.51

HTB Inc.
900 N. Stiles Ave.
Oklahoma City, OK 73104
(405) 239-4700

Above figure excludes 14 percent of activity that involved highway and civil projects and municipal water and waste treatment plants. Activity included 48 percent institutional and 24 percent commercial. Firm added an architectural department focusing on the design of R&D facilities. Other offices are located in Tulsa, Washington, D.C., and Arlington, Va. *Rex M. Ball, Chmn., CEO*

31 (39) $13.40

Phillips Swager Associates Inc.
3622 N. Knoxville
Peoria, IL 61603
(309) 688-9511

Firm has directed more attention to its criminal justice security division and has implemented a quality assurance program in the last year. Activity was 75 percent institutional, 15 percent industrial and 10 percent commercial. Current projects include the $11.4 million Blackhawk County Jail in Waterloo, Iowa, and the Putman County Jail in Cookeville, Tenn. *Donald Z. White, CEO*

24 (26) $15.27

Burt Hill Kosar Rittelmann Associates
400 Morgan Center
Butler, PA 16001
(412) 285-4761

Firm continues to specialize in health care, historic renovation, educational facilities and corporate offices. Other offices are in Pittsburgh, Washington, D.C., Philadelphia and Fort Myers, Fla. Staff totals 240 and includes 63 registered architects. A $250 million renovation at the Presbyterian University Hospital in Pittsburgh is a current project. *John Kosar, Pres.*

28 (30) $14.20

Vitetta Group
The Wallace Building
642 N. Broad St.
Philadelphia, PA 19130
(215) 235-3500

The Vitetta Group continues to specialize in educational, justice, health care and commercial facilities, as well as in historic preservation and adaptive reuse. Other offices are located in Houston and Camden, N.J. Activity was 95 percent institutional and 5 percent commercial. Firm anticipates a 10 percent increase in revenues in the coming year. *Francis G. Vitetta, Pres.*

32 (38) $13.02

TRA
215 Columbia
Seattle, WA 98104
(206) 682-1133

Firm has three subsidiaries located in Anchorage, Denver and Boston. Airport facilities, convention centers, hotels, and parks and recreational facilities are among TRA's specialties. Projects for federal, state and local governments accounted for 60 percent of firm's work. Current projects include the new Denver International Airport and a terminal expansion for Delta Airlines in Cincinnati. *Allen D. Moses, Chmn.*

25 (32) $14.86

Heery Architects & Engineers Inc.
999 Peachtree St., N.E.
Atlanta, GA 30367
(404) 881-9880

Above figure excludes 18 percent of activity that was derived from projects outside the U.S. Parent company is Heery International Inc. Heery opened new offices in Washington, D.C., Charlotte, N.C., and Seattle. Other offices are in San Francisco and London. Corporate facilities accounted for 49 percent of firm's work, while 19 percent involved government projects. *James J. Moynihan, CEO; Joseph M. Harris, Pres.*

29 (31) $13.98

Gresham, Smith and Partners
3310 West End Ave.
P.O. Box 1625
Nashville, TN 37203
(616) 385-3310

Above figure excludes the 21 percent of activity that involved municipal water and waste treatment plants and highway and civil projects. C.I.I. activity was 67 percent institutional, 7 percent industrial and 5 percent commercial. Other offices are located in Birmingham, Ala., and Jacksonville, Fla. *Gary F. Hunt, Managing. Prin.*

33 (23) $12.86

Page Southerland Page
P.O. Box 2004
Austin, TX 78768
(512) 472-6721

Firm acquired Kenneth Bentsen & Associates of Houston. Activity was 80 percent institutional, 15 percent commercial and 5 percent industrial. Firm's marketing emphasis includes health care, high-tech facilities and educational buildings. Staff totals 162 and includes 60 registered architects and 27 registered engineers. *Jay Willmann, James Wright, Acree Carlisle, Matthew Kreisle III, Mattia J. Fiabiano III, Prins.*

26 (36) $14.80

The Ballinger Co.
Independent Square West
Philadelphia, PA 19103
(215) 592-0900

Firm's specialties include R&D facilities, health care buildings and offices. Current projects include the $42 million St. Elizabeth Hospital in Elizabeth, N.J., and the $36 million Reading Hospital in Reading, Pa. Activity was 35 percent commercial, 34 percent institutional and 31 percent industrial. *W.R. Gustafson, Pres.; Frank Butler, V.P.*

The 59,800-sq.-ft. Glaxo Sales Training Center, Research Triangle Park, N.C., was a Heery International project.

ARCHITECT/ENGINEERS

34
(23)
$12.75

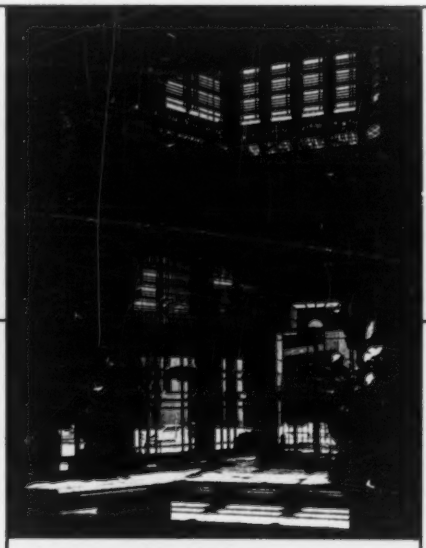
Harley Ellington
Pierce Yee Associates
26913 Northwestern Hwy.
Southfield, MI 48086
(313) 262-1500

Firm is the founding member of a national network of firms known as the HEPY Group, which contains six firms. Among them are KDA/HEPY P.C. of Denver, and Burke, Bales & Mills/HEPY Inc. of Orlando. Specialties include health care, industrial and cemetery and mausoleum facilities. Activity was 40 percent institutional, 40 percent industrial and 20 percent commercial. *Dennis M. King, Pres.*

35
(27)
$12.65

Everett I. Brown Co.
950 N. Meridian
Indianapolis, IN 46204
(317) 237-7000

Activity was 60 percent institutional, 25 percent industrial and 15 percent commercial. Reconstruction accounted for 35 percent of firm's work. Staff totals 151 and includes 34 registered architects, and three each of registered structural, mechanical and electrical engineers. Firm expects to complete a $10 million addition to Bloomington Hospital, Bloomington, Ind., in 1993. *Joseph S. Brown, Managing Ptnr.*



The Sanwa Bank Plaza, Los Angeles, was designed by Albert C. Martin & Associates. Photo: Fred Licht

42
(28)
$9.15

Albert C. Martin
& Associates
811 W. 7th St.
Los Angeles, CA 90017
(213) 683-1900

Albert C. Martin reports that trends in the Southern California real estate market have demanded that the firm focus its marketing efforts on work in the public sector. The economy and sluggish market have caused the firm to operate more efficiently and pare down its staff and overhead. Activity was 75 percent institutional and 25 percent commercial. *Christopher C. Martin, Managing Ptnr.; David C. Martin, Design Ptnr.*

43
(45)
$8.98

Stevens & Wilkinson Inc.
100 Peachtree St., N.W.
Suite 2450
Atlanta, GA 30303
(404) 522-8888

Above figure excludes 9 percent of work that involved highway and civil projects. Activity included 70 percent institutional and 21 percent commercial. The 117-person firm is focusing its marketing efforts on retail projects, correctional institutions and health care facilities. During the last year, the firm completed several Target Department Stores in Florida and Michigan. *M. Lamar Young, CEO*

36
(18)
$12.35

3D/International
1900 West Loop South
Suite 600
Houston, TX 77027
(713) 871-7000

During the past year, the firm added an environmental services group. In addition to its Houston headquarters, the firm has seven other offices including those in Sacramento, Seattle and Hong Kong. Activity included 55 percent institutional and 40 percent commercial. Firm is currently working on a $1 billion project for the Pentagon in Washington, D.C. *Charles B. Thomsen, Pres., CEO*

39
(43)
$11.40

BSA Design
6810 N. Shadeland Ave.
Indianapolis, IN 46220
(317) 849-7878

Firm changed its name from Boyd/Sobieray Associates to BSA Design. Firm is known for health care and research buildings. Activity was entirely institutional. Staff totals 132 and includes 24 registered architects, and 10 registered engineers. *Donald B. Altmeyer, Pres.*

44
(54)
$8.65

Fanning/Howey
Associates Inc.
540 E. Market
Celina, OH 45822
(419) 586-7771

Firm opened two new offices, one in Williamston, Mich., and the other in Lexington, Ky., in an effort to enhance its educational marketing efforts. Other offices are in Michigan City, Ind., West Palm Beach, Fla., and Indianapolis. Activity included 98 percent institutional. Reconstruction accounted for 48 percent of the firm's work. *Ronald H. Fanning, Pres.*

37
(33)
$12.00

Setter, Leach
& Lindstrom Inc.
1100 Peavey Bldg.
2nd Ave. at 8th St.
Minneapolis, MN 55402
(612) 338-8741

Firm is currently working on a five-year renovation and expansion program for the University of Minnesota Hospital and Clinic in Minneapolis. Included in the project are the addition of four operating rooms and the renovation of 20 departments. In addition to medical facilities, the firm is also known for commercial, retail and educational buildings. *Richard Vasatka, Pres.*

40
(40)
$10.05

Fred H. Thomas
Associates PC
2560 N. Triphammer Road
Ithaca, NY 14850
(607) 257-1300

Firm continues to specialize in institutional work, specifically the design of educational buildings and master planning for school districts. Other offices are in Garden City, N.Y., Princeton, N.J., and Southbury, Conn. Reconstruction accounts for 48 percent of the firm's work. Activity was 95 percent institutional and 5 percent commercial. *Fred H. Thomas, Pres.*

45
(34)
$8.36

GSGSB
Berens Building
P.O. Box 18411
Clarks Sumit, PA 18411
(717) 586-1761

Figure above excludes 12 percent of activity involving highway and civil projects. Firm reports that it has seen a rise in institutional projects as a result of an increase in educational, health care and government jobs. Projects for federal, state and local governments accounted for 57 percent of GSGSB's billings. GSGSB/HORST in Port Washington, N.Y., is an interior design subsidiary. *C. Gilboy, Pres.*

38
(35)
$12.00

Einhorn Yaffee Prescott
Broadway at Beaver
Albany, NY 12207
(518) 463-2141

EYP reports that corporate work has grown because of the firm's marketing focus on Fortune 500 companies. Activity was 55 percent institutional, 35 percent commercial and 10 percent industrial. Current projects include several educational facilities, including those at Gallaudet University in Washington, D.C., Cornell University in New York and College of St. Rose in Albany. *Steven Einhorn, Pres.*

41
(42)
$10.00

O'Donnell Wicklund
Pigozzi & Peterson
570 Lake Cook Road
Deerfield, IL 60015
(708) 940-9600

Activity was 88 percent institutional and 12 percent commercial. Staff totals 150. Among OWP&P's specialties are geriatric facilities, educational buildings and corporate interiors. The firm is currently renovating several suburban Chicago high schools, including the $22 million Lake Forest High School and the $14 million Homewood-Flossmoor High School. *Leonard A. Peterson, Pres.*

46
(44)
$7.91

Neptune-Thomas-
Davis
1550 W. Colorado Blvd.
Pasadena, CA 91105
(213) 255-1401

Health care and educational facilities are this firm's specialties. Activity was 99 percent institutional and 1 percent commercial. Recent projects include the $6.7 million Odell McConnel School of Law expansion, and a $9 million humanities and visual arts center, both for Pepperdine University in Malibu. Staff totals 92. *Anthony O'Keefe, Pres.*

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Wolfberg/Alvarez designed the Central Chiller Plant East at Miami International Airport.

47 (47) $7.84
Holabird & Root
300 W. Adams St.
Chicago, IL 60606
(312) 726-5960

Another office is located in Rochester, Minn. Current projects include a 300,000-sq.-ft. building for Loyola University's School of Business in Chicago, and a 150,000-sq.-ft. building for the School of Architecture at the University of Wisconsin, Milwaukee. Activity includes 60 percent institutional and 33 percent commercial. *James Baird, Jeff Case, Frank Castelli, Gerald Horn, Roy Solfisburg, Ptnrs.*

48 (51) $7.84
Sargent Webster Crenshaw & Folley
2112 Erie Blvd. East
Syracuse, NY 13224
(315) 472-3361

To improve efficiency, this 120-person firm was reorganized and now uses a studio system. The firm also reports that a greater percentage of its work is devoted to renovation and adaptive reuse projects. Reconstruction accounted for 65 percent of the firm's billings. Other offices are located in Albany, Buffalo and South Burlington, Vt. *Donald J. Skowron, Managing Ptnr.*

49 (50) $7.60
O'Brien/Atkins Associates
P.O. Box 12037
Research Triangle, NC 27709
(919) 941-9000

Firm specializes in correctional facilities, airports and research and technology buildings. Activity was 45 percent institutional, 33 percent commercial and 22 percent industrial. Government work accounted for 40 percent of billings, while reconstruction accounted for 14 percent. *William L. O'Brien, Chmn., CEO*

50 (46) $7.54
Wolfberg/Alvarez & Associates
5960 S.W. 57th St.
Miami, FL 33143
(305) 666-5474

Above dollar figure excludes the 15 percent of activity that involved utility plants and highway and civil projects. Firm is taking advantage of its bilingual staff to market the firm to American corporations that are developing projects in Puerto Rico and in Central and South America. Government work accounted for 60 percent of billings. *Julio E. Alvarez, David A. Wolfberg, Prins.*

51 (48) $7.40
Schmidt Garden & Erikson Inc.
104 S. Michigan Ave.
Chicago, IL
(312) 332-5070

Other offices are in Dayton, Ohio, and Sarasota, Fla. Activity included 85 percent institutional and 8 percent industrial. This year the firm expects to complete a $25 million addition and renovation at Porter Memorial Hospital in Valparaiso, Ind., and the Cook County Juvenile Center in Chicago. *Robert F. Lange, Pres., CEO*

52 (52) $7.31
Ellis/Naeyaert/Genheimer Associates
3290 W. Big Beaver Road
Troy, MI 48084
(313) 649-2000

Above figure excludes the 5 percent of activity that involved highway and civil projects. Activity was 50 percent industrial, 15 percent institutional and 30 percent commercial. Recent projects include a 122,000-sq.-ft. clinical research building in Ann Arbor, Mich., a U.S. Customs inspection facility in Detroit and a research laboratory addition in Farmington Hills, Mich. *J. Edward Genheimer, Pres., CEO*

53 (57) $7.30
Sherertz, Franklin, Crawford, Shaffner Inc.
305 S. Jefferson St.
Roanoke, VA 24011-2000
(703) 344-7774

Hospitals, health care facilities and retirement facilities that include long-term care are this firm's specialties. Activity was 60 percent commercial, 35 percent institutional and 5 percent industrial. Heron Point, a $29 million retirement community in Chestertown, Md., and another $16 million retirement facility in Quarryville, Pa., were completed last year. *Patrick N. Schaffner, CEO, Pres.*

54 (—) $6.78
The Olde McGuire & Shook Corp.
6765 N. State Road 37
Bloomington, IN 47402
(812) 876-2020

Above figure excludes 3 percent of activity that involved utility plants and highway and civil projects. Firm is new to the listing this year. Educational facilities are a design specialty. The Cranbrook Design Group, Indianapolis, is an interior design subsidiary. Activity included 72 percent institutional and 24 percent commercial. *R. Duane Odle, Pres.*

55 (58) $6.50
Fletcher-Thompson Inc.
Two World Trade Plaza
Bridgeport, CT 06604
(203) 366-5441

Firm reports that it is doing more consulting and less design work. Activity was 63 percent institutional, 22 percent commercial and 15 percent industrial. A current project is the North Central Connecticut Correctional Facility in Suffield, Conn., an approximately $100 million facility that will open in phases during 1992 and 1993. *John G. Phelan, Pres., CEO*

56 (55) $6.24
DES Architects + Engineers
399 Bradford St.
Redwood City, CA 94063
(415) 364-6453

Above figure excludes 5 percent of activity that involved single-family residential. Another office is located in Fremont, Calif. Staff totals 80 and activity included 50 percent commercial, 35 percent industrial and 10 percent institutional. Corporate facilities accounted for 60 percent of billings. *Keith P.J. Bautista, Pres.*

57 (—) $6.24
Schemmer Associates Inc.
1044 N. 115th St.
Omaha, NE 68154
(402) 493-4800

Firm is new to this category. In previous years it was listed in the E/A category. Other offices are in Seattle, Davenport, Iowa, and Moline, Ill. Firm closed its Orlando office and sold its interest in a Tampa, Fla., affiliate. Specialties include industrial and educational buildings. Activity included 58 percent institutional and 36 percent commercial. *Roger J. Wozny, Pres.*

58 (60) $6.04
JMGR Inc.
80 Monroe Ave.
Memphis, TN 38103
(901) 526-9600

Firm's marketing emphasis is health care facilities. It has also experienced growth in the areas of engineering and interior design. Activity was 90 percent institutional and 10 percent commercial. Staff totals 75 and includes 26 registered architects. A current project is a $55 million expansion and renovation of Roanoke Memorial Hospital in Roanoke, Va. *Walk C. Jones, CEO*

59 (49) $5.96
The Durrant Group
2701 International Lane
Madison, WI 53704
(719) 633-3003

Firm acquired Roberts/Dinsmore Associates of Phoenix. Other offices are in Colorado Springs, Denver and Dubuque, Iowa. The firm is known for justice, health care, education, retail and industrial projects. Activity was 57 percent institutional, 30 percent commercial and 13 percent industrial. Reconstruction accounted for 40 percent of firm's billings. *Norman E. Wirkler, Pres.*

60 (41) $5.94
KZF Inc.
655 Eden Park Drive
Cincinnati, OH 45202
(513) 621-6211

Above dollar figure excludes the 20 percent of activity that involved highway and civil projects. KZF reports that institutional and government projects accounted for over 70 percent of the firm's work. Staff totals 90 and includes 23 registered architects. An $8 million addition and renovation at Brown County General Hospital in Georgetown, Ohio, is expected to be finished in 1993. *Gregory K. Rhoads, Pres., CEO*

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ENGINEER/ ARCHITECTS

WORK BEGINS TO TURN AROUND FOR THE ENGINEER/ARCHITECTS

Although this group reported a 2 percent decline in billings last year, this year billings remain level

1 (1) **$309.74**

CRSS Inc.
1177 West Loop South
Houston, TX 77027
(713) 552-2000

Major subsidiaries include CRS Sirrine Engineers (Greenville, S.C.), CRSS Architects (Houston), CRSS Constructors (Houston), and CRSS Civil Engineers (Chicago). The firm's market emphasis includes advance facility planning, specialized corporate facilities, R&D, health care and interior architecture. The firm is also listed in the Construction Managers category of this survey. *Bruce W. Wilkinson, Chmn., CEO; Richard L. Daerr, Pres., COO; Steve R. Pierce, Sr. VP, CFO*

2 (2) **$233.23**

Sverdrup Corp.
13723 Riverport Drive
Maryland Heights, MO 63043
(314) 436-7600

Industrial buildings accounted for 69 percent of the firm's engineering/architectural work, followed by institutional (6 percent) and commercial (2 percent). Current industrial design projects include a $100 million processing facility for Hershey in Hershey, Pa., and a 210,000-sq.-ft. distribution/packaging facility for Tropicana in Jersey City, N.J. The firm is also listed in the Construction Managers and Contractors categories. *Brice R. Smith Jr., Chmn., CEO*

3 (3) **$137.10**

Lockwood Greene Engineers Inc.
1500 International Drive
Spartanburg, SC 29304
(803) 578-2000

The firm's market emphasis includes the food & beverage, pharmaceutical, chemical, general manufacturing, aerospace and aviation industries. Staff numbers 1,843. Mechanical/electrical engineering accounted for 44 percent of design work, structural engineering for 30 percent and architecture for 20 percent. The parent firm of Lockwood Greene is Philipp Holzmann AG. *Donald R. Luger, Pres., Chmn., CEO*

4 (6) **$127.71**

Day & Zimmermann Inc.
1818 Market St.
Philadelphia, PA 19103
(215) 299-8000

The market emphasis of this privately held firm includes the food & beverage, pharmaceutical, biotechnology and semiconductor industries. Among current clients are Pepperidge Farm, Centocor, Clorox and Xerox. In addition to its engineering/architectural services, the firm also provides design/build and construction management services, which are not reflected in the dollar volume reported above. *H.L. Yoh Jr., Chmn.*

5 (4) **$125.00**

Belcan Corp.
10200 Anderson Way
Cincinnati, OH 45242
(513) 891-0972

Belcan's market emphasis is on facilities for the pharmaceutical, food, pulp & paper, and specialty chemical industries. The staff of this privately held firm numbers 2,800. Industrial buildings accounted for 92 percent of the firm's work. Current projects include pharmaceutical facilities at three locations in Indiana. *Ralph G. Anderson, CEO*

6 (5) **$96.00**

Daniel, Mann, Johnson & Mendenhall (DMJM)
3250 Wilshire Blvd.
Los Angeles, CA 90010
(213) 381-3663

Staff numbers 1,174, including 181 registered architects. Projects under way include a $500 million modernization of the Pentagon and an $89 million psychiatric center in the Bronx, N.Y. DMJM reports that growth in public-building projects has helped to offset the decline in private-sector work. This employee-owned firm is also listed in the Construction Managers category of this survey. *M. Paul Brott, Pres.*

7 (7) **$66.00**

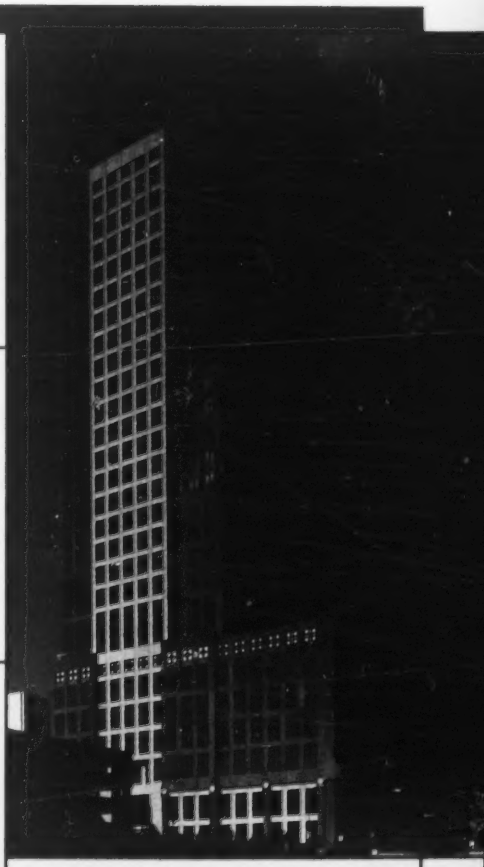
Holmes & Narver Inc.
999 Town & Country Road
Orange, CA 92688
(714) 567-2400

Holmes & Narver is best-known for computer facilities, criminal justice facilities, industrial buildings and airfield-related buildings. The firm reports an increasing market emphasis on public projects, which accounted for 50 percent of its work. The dollar volume reported above does not include overseas work, which accounted for 21 percent of the firm's total revenues. The parent firm of Holmes & Narver is AECOM Technology Corp. *Zoltan A. Stacho, Pres.*

8 (8) **$58.50**

URS Consultants Inc.
One Penn Plaza, Suite 610
New York, NY 10119
(212) 736-4444

Projects under way include a master plan for renovation of a 250,000-sq.-ft. hospital and a 10,000-sq.-ft. addition in Queens, N.Y., the $24 million National Research Center for Coal and Energy in Morgantown, W. Va., and a $20 million outpatient care facility in Columbus, Ohio. Staff of 1,102 includes 51 registered architects and 42 registered structural engineers. *Irwin L. Rosenstein, Pres.*



***URS Consultants designed** and engineered the $63 million Franklin County Government Center in Columbus, Ohio.* Photo: David Emery

9 (49) **$47.43**

Parsons Main Inc.
Prudential Center
Boston, MA 02199
(617) 262-3200

Parsons Main, whose parent company is the Parsons Corp., Pasadena, Calif., was formerly known as Chas. T. Main Inc. In the C.I.I. building market, Parsons Main is best-known for industrial and manufacturing facilities, printing plants, pulp & paper, office, research and testing facilities. Current projects include production plants for the New York *Times* and the Dallas *Morning News*. *James T. Callahan, Pres.; Ronald L. Holey, Exec. VP*

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ENGINEER/ARCHITECTS

10 (9) **$45.00**
A. Epstein and Sons International Inc.
600 Fulton St.
Chicago, IL 60606
(312) 454-9100

The firm has acquired Interior Systems Design (ISD) and combined it with an existing group to form a new interiors subsidiary, InteriorSpace International. In addition to more traditional architectural and engineering services, the firm's marketing emphasis includes consulting services on strategic planning, operations analysis and organizational design. *Melvin Kupperman, Pres., CEO; Sidney Epstein, Chmn.*

11 (10) **$42.56**
SSOE Inc.
1001 Madison Ave.
Toledo, OH 43624
(419) 255-3830

In addition to its headquarters in Toledo, this privately held firm has major offices in Flint and Troy, Mich., Bellevue, Wash., and Nashville. During the past year the firm implemented a total quality management program. Industrial buildings accounted for 70 percent of the firm's design and planning work. Staff numbers 677. *Francis L. McAuliffe Jr., CEO, Pres., Chmn.*

12 (20) **$39.57**
Burns & McDonnell
4800 E. 63rd St.
P.O. Box 419173
Kansas City, MO 64141
(816) 333-4375

The firm's total billings for design and planning of U.S. projects were $84 million in 1991; the dollar volume reported above represents only the 47 percent involving commercial, institutional and industrial buildings. This employee-owned firm has a staff of 1,144. In addition to the Kansas City headquarters, the firm has major offices in Dallas, Miami, Denver and St. Louis. *Newton A. Campbell, Chmn.; Dave G. Ruf Jr., Pres.*

13 (13) **$37.84**
Giffels Associates Inc.
25200 Telegraph Road
P.O. Box 5025
Southfield, MI 48086-5025
(313) 355-4600

An architectural/engineering subsidiary, Giffels Hoyem Basso, is located in Troy, Mich. The firm's total staff numbers 485, including 69 registered architects, 65 registered mechanical engineers and 36 registered structural engineers. Projects scheduled for completion in 1993 include the massive, 3.3 million-sq.-ft. Chrysler Technology Center in Auburn Hills, Mich. *Daniel J. Bohn Jr., Chmn.*

14 (14) **$29.12**
Lester B. Knight & Associates Inc.
549 W. Randolph St.
Chicago, IL 60606
(312) 346-2100

The firm has been reorganized into a holding company with five affiliates: Knight Architects Engineers Planners, Knight Management Consulting, Knight Cast Metals, Keller & Gannon (San Francisco) and Knight Wendling (Europe). The dollar volume reported above does not include overseas work, which accounted for 48 percent of total revenues. *DeForest P. Davis Jr., Chmn., CEO; Stephen C. Mitchell, Pres., COO*

15 (11) **$24.33**
Dewberry & Davis
8401 Arlington Blvd.
Fairfax, VA 22031
(703) 849-0100

The volume reported above for design of C.I.I. buildings represents 35 percent of the firm's total billings of $69.5 million. Staff of 1,057 includes 30 registered architects, 38 registered structural engineers and 18 mechanical engineers. Among projects under way are an apartment complex in Washington, D.C., and a $135 million office/research complex in Virginia. *Sidney O. Dewberry, Mng. Ptnr.; Barry K. Dewberry, General Ptnr.*

16 (16) **$23.46**
Rosser Fabrap International
524 W. Peachtree St., N.E.
Atlanta, GA 30308
(404) 876-3800

During the past year Rosser Fabrap acquired the engineering firm of Bovay McGinty, Houston. The firm is best-known for institutional and aviation-related projects. Staff numbers 355. Among projects under way are the Georgia Dome in Atlanta; the expansion of the Greensboro (N.C.) Coliseum; a 16,000-seat multi-use arena for the University of Arkansas; and the Pyramid, a 20,000-seat civic arena in Memphis. *Paul C. Rosser, CEO*

17 (22) **$19.84**
Greiner Engineering Inc.
909 E. Las Colinas Blvd.
Suite 1900, LB-44
Irving, TX 75039-3907
(214) 869-1001

In the C.I.I. building market, the firm is best-known for educational, health care, commercial and industrial facilities. The firm reported total billings of $99.2 million, which included extensive highway and civil projects. Current building projects include renovations and new construction for a number of school districts in Michigan. The staff of this publicly held firm numbers 1,548. *Frank T. Callahan, Pres., CEO*

Northpoint Marina, located on Lake Michigan in Winthrop Harbor, Ill., is a project of A. Epstein & Sons International, Chicago. Photo: Wayne Cable

18 (31) **$16.56**
Foth & Van Dyke
2737 S. Ridge Road
P.O. Box 19012
Green Bay, WI 54307
(414) 497-2500

The firm has branch offices in St. Louis, Chicago, Tampa, Minneapolis, Milwaukee and Madison, Wis. In the C.I.I. building market, the emphasis of this privately held firm includes public-sector projects and facilities for the food, paper, financial and health care industries. Among current projects are two new grade schools in Wisconsin. *Steven Van Dyke, Chmn.; Joseph Homel Jr., Pres.; Neil Van Dyke, VP*

19 (18) **$16.00**
The Sigel Group
Sabine & Essex Avenues
Narberth, PA 19072
(215) 839-3200

The firm focuses on manufacturing and R&D facilities for the pharmaceuticals and electronics industries. Current clients include Sony, Upjohn, Eli Lilly, Thomson Consumer Electronics and the University of Pennsylvania. This privately held firm has a staff numbering 232 employees, including 16 registered architects and 13 registered mechanical engineers. *John K. Henderson, Chmn.; G. William Leishear, Pres.*

20 (15) **$15.91**
The Benham Companies
9400 N. Broadway
Oklahoma City, OK 73156
(405) 478-5353

During the past year, ownership of the firm was transferred to preselected employees. The firm reports a new emphasis on growth by acquisitions in the environmental engineering and control systems design/fabrication areas, as well as design/build work in association with J.A. Jones Construction. The firm operates major branch offices in Tulsa, St. Louis, Detroit, Dallas, San Antonio, Phoenix and Washington, D.C. *Donald L. Wickens, CEO*

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21 (29) $15.40
EI Associates
115 Evergreen Place
East Orange, NJ 07108
(201) 672-5100

This privately held firm is best-known for schools and for facilities in the pharmaceutical, food and specialty chemical industries. Staff has 275 employees. *Peter A. Cipriano, Pres.*

Marathon Inc. designed and engineered this 80,000-sq.-ft. corporate office building in Appleton, Wis., which the firm occupied earlier this year.

22 (12) $14.90
STV Group
11 Robinson St.
Pottstown, PA 19464-0459
(215) 326-4600

During the past year this publicly held firm has undergone an internal reorganization and has broadened its marketing to include advanced research, transportation, environmental and infrastructure projects. The dollar volume reported above for commercial, industrial and institutional buildings work represents 25 percent of the firm's total billings of $59.6 million for design and planning. Staff has 879 employees. *Michael Haratunian, Pres., CEO*

25 (24) $13.91
Reynolds, Smith and Hills Inc.
4651 Salisbury Road, #400
Jacksonville, FL 32256
(904) 296-2000

RS&H focuses its services on eight markets: buildings and multi-use structures, aviation, industrial and manufacturing, technology, community & land development, aerospace & defense, infrastructure, and transportation. Recent projects include terminals at the Jacksonville (Fla.) International Airport and Bishop International Airport (Flint, Mich.). *Leerie T. Jenkins Jr., Pres., CEO*

28 (35) $11.85
SEC Donohue Inc.
P.O. Box 24000
16 Brendan Way
Greenville, SC 29616
(803) 234-3000

The former Donohue & Associates was acquired in October 1991 by Wheelabrator Technologies Inc. SEC Donohue Inc. was created in January 1992 by the merger of Donohue and Birrine Environmental Consultants Inc. (SEC) of Greenville, S.C. SEC Donohue's total revenues from design and planning were $127 million in 1991, of which 9 percent involved C.I.I. building projects. *William Carpenter, CEO*

23 (17) $14.21
Ghafari Associates Inc.
14147 Farmington Road
Livonia, MI 48154
(313) 421-3900

Construction is under way on the firm's new headquarters building in Dearborn, Mich. Branch offices are located in Flint, Mich., and Indianapolis. The firm emphasizes plant refurbishment/renovation; reconstruction accounted for 80 percent of its billings. Projects completed last year include a glass fabrication plant in Tennessee, a lab/office building for Wayne State University, Detroit, and an addition for Children's Hospital of Michigan. *Yousif B. Ghafari, Pres., CEO*

26 (23) $13.20
Lev Zetlin Associates
641 Ave. of the Americas
New York, NY 10011
(212) 741-1300

Market emphasis involves suburban commercial buildings, labs, schools, industrial, distribution/warehousing, airport terminals and hangars, special structures and building renovation. During the past year the firm established a division dedicated to building repair work. Reconstruction accounted for 50 percent of the firm's work. Staff of 155 includes 28 registered structural engineers and 16 registered architects. *Joseph N. Zuliani, Abe Gutman, Sr. VPs*

29 (21) $10.80
Bennett Ringrose Wolsfeld Jarvis Inc. Group
700 Third St. South
Minneapolis, MN 55415
(612) 370-0700

This firm incorporates BRW Inc., which provides urban design, planning, transportation and civil engineering services, and BRW Architects, which provides architectural and master planning services. The firm is best-known for municipal, educational, recreational, mixed-use, hotel and light-rail transit facilities. *Mark G. Swenson, Pres., BRW Architects; Donald Hunt, Pres., BRW Inc.*

24 (28) $14.04
Marathon Inc.
P.O. Box 335
Menasha, WI 54952
(414) 954-2000

Marathon is best-known for facilities for the pulp & paper, chemical, and food & beverage industries as well as corporate research and office facilities. Branch offices are located in Appleton, Wis., Raleigh, N.C., and Tarrytown, N.Y. Staff of 205 employees includes 20 registered mechanical engineers, 14 registered structural engineers and 15 registered architects. *Harold R. Miller, Pres., CEO*

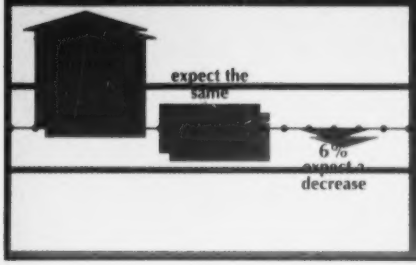
27 (—) $12.99
Sear-Brown Group
85 Metro Park
Rochester, NY 14623
(716) 475-1440

This employee-owned firm has a staff of 339, including 16 registered structural engineers, 14 registered architects and 11 registered mechanical engineers. The firm is best-known for industrial facilities, parking structures, concrete restoration and maintenance, and large land development projects. Reconstruction projects accounted for 50 percent of the firm's work. *Anthony G. Maletta, CEO*

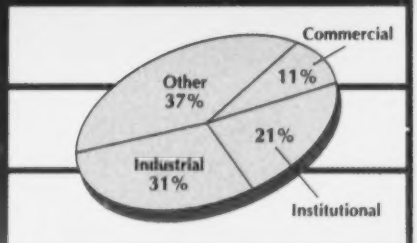
30 (33) $10.38
Hayes, Seay, Mattern & Mattern Inc.
P.O. Box 13446
Roanoke, VA 24034
(703) 857-3100

The firm is best-known for health care, research, industrial, explosives, correctional, educational and communications facilities. It is also known for renovation projects, which accounted for 65 percent of the firm's work. Total staff numbers 334, including 24 registered architects, 20 registered structural engineers and 20 registered mechanical engineers. *H. Boyd Dickenson, CEO; T. Howard Noel, Pres.*

What is the Engineer/Architects' Outlook for Revenues in 1992?



Breakdown of the Engineer/Architects' Billings



31 (27) $10.37
Piedmont Olsen Hensley Inc.
P.O. Box 1717
Greenville, SC 29602
(803) 242-1717

Formerly known as Piedmont Olsen, the firm has acquired Hensley-Schmidt Inc., with offices in Atlanta, Chattanooga and Raleigh. The firm's marketing emphasis is on industrial buildings. Staff numbers 349. Recent projects include a computer science building for Furman University, Greenville, S.C., and manufacturing facilities for Novo Nordisk in Clayton and Franklinton, N.C. *J.V. Boyette Jr., Pres., Chmn.*

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ENGINEER/ARCHITECTS

32 (—) $10.19

Merrick & Co.
P.O. Box 22026
10855 E. Bethany Drive
Denver, CO 80222
(303) 751-0741

The firm is best-known for industrial and institutional buildings and technical specialties in labs, theaters, maintenance, warehousing and nuclear facilities. Branch offices are located in Phoenix and Los Alamos, N.M. The firm has 294 employees. Projects under way include a $30 million airport mail facility in Denver, post offices in Fort Collins, Aurora and Littleton, Colo., and a seed storage facility in Fort Collins. *Bruce Walker, Pres.*

33 (30) $9.97

A.M. Kinney Inc.
2900 Vernon Place
Cincinnati, OH 45219
(513) 281-2900

In addition to its Cincinnati headquarters, the firm has a major office in Chicago. Kinney has 153 full-time employees. Projects under way include a $6 million lab/office in Summit, N.J., for Hoechst Celanese, a science center for Cedarville College in Cedarville, Ohio, and a $40 million pharmaceutical research facility in E. Hanover, N.J., for Sandoz. *A.M. Kinney Jr., Chmn.; G.N. Finch, COO; D.L. Reeder, Pres.; R.L. Ahlbrand, Vice Chmn.*

34 (36) $9.85

Post, Buckley, Schuh & Jernigan Inc.
8600 N.W. 36th St.
Miami, FL 33166
(305) 592-7275

Commercial, industrial and institutional building projects accounted for 15 percent of the firm's work. Staff of 920 employees includes 27 registered structural engineers and six architects. Current projects in the Miami area include a 286-unit luxury residential project, a 200-acre warehouse/retail project and reconstruction of the Seaquarium. *William W. Randolph, Chmn., CEO; H. Michael Dye, Pres., COO*

35 (25) $9.59

Barge, Waggoner, Sumner & Cannon
162 3rd Ave. North
Nashville, TN 37201
(615) 254-1500

In addition to its Nashville headquarters, this employee-owned firm has offices in Knoxville, Memphis, Miamisburg, Ohio, and Dothan and Huntsville, Ala. Staff has 369 employees. The firm's emphasis is on industrial buildings and recreation centers. Current projects include multiple renovation projects for the General Services Adminstration. *William H. Cannon, Chmn.; Jack L. Wood, Pres.*

36 (—) $9.05

The RBA Group
1 Evergreen Place
Morristown, NJ 07962-1927
(201) 898-0300

This privately held firm is best-known for institutional buildings, space planning and facilities management. Branch offices are located in New York City, Atlanta, Baton Rouge, Columbia, Md., Charlotte, N.C., and Blue Bell, Pa. Among recent projects are program and feasiblity studies for a police academy in the Bronx, N.Y., and an addition and alteration to a general mail facility in Edison, N.J. The firm's staff has 225 employees. *William Garro, Pres.*

Four E/A firms reported that they had implemented total quality management programs during the past year

37 (—) $9.00

L. Robert Kimball & Associates Inc.
615 W. Highland Ave.
Ebensburg, PA 15931
(814) 472-7700

The firm is very active in correctional facilities; correctional projects are now under way at six locations in Pennsylvania. During the past year the firm acquired Chase Architectural Associates, Syracuse, N.Y. Total staff has 570 employees. The figure reported above for C.I.I. buildings work represents 25 percent of the firm's total billings of $36 million. *L. Robert Kimball, Pres.*

38 (37) $8.19

Stetson-Harza
181 Genesee St.
Utica, NY 13501
(315) 797-5800

The firm's major markets include education, health care, government, industrial (pharmaceuticals, chemical, food) and commercial projects. In addition to its headquarters, this employee-owned firm operates offices in Troy and Newburgh, N.Y., Concord, N.H., and Chicago. Total billings for calendar 1991 were $18.2 million; C.I.I. work represented 45 percent of that total. *John B. Stetson, Pres., CEO*

39 (44) $7.66

Buchart-Horn Inc./ BASCO Associates
P.O. Box 15055
York, PA 17405-7055
(717) 843-5561

The firm is best-known for municipal and educational facilities, health care, retirement centers and industrial facilities. Total billings for design and planning last year were $21.9 million, of which 35 percent involved C.I.I. buildings. Among projects under way are an expansion to the York County (Pa.) prison and both a new elementary school and an addition to a high school in Schuylkill Valley, Pa. *John B. Jung, Pres.*

40 (41) $7.60

TAMS Consultants Inc.
655 Third Ave.
New York, NY 10017
(212) 867-1777

The firm is best-known for airport and rail terminals, transit facilities, educational facilities and industrial/maintenance facilities. Staff of 405 employees includes 21 registered architects and 26 registered structural engineers. Total billings for 1991 were $38 million, of which 20 percent involved commercial, industrial and institutional buildings. *Austin E. Brant Jr., Chmn.; Dana E. Low, Pres.*

41 (40) $7.55

Shive-Hattery Inc.
P.O. Box 1599
Cedar Rapids, IA 52406-1599
(319) 362-0313

In addition to its Cedar Rapids headquarters, this employee-owned firm with a staff of 189 has branch offices in Moline, Ill., and Iowa City and Des Moines, Iowa. Recently completed projects include a $7.8 million medical clinic in Cedar Rapids and a renovation/addition to a hotel in Rock Island, Ill. Reconstruction accounted for 29 percent of the firm's work. *Donald P. Hattery, Chmn.*

Shive-Hattery Inc. of Cedar Rapids, Iowa, designed this corporate headquarters facility in Des Moines, Iowa, for the Anderson Erickson Dairy. Photo: Shive-Hattery

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42 (39) **$7.51**

TSP Group Inc.
1110 West Ave. N., #102
Sioux Falls, SD 57104
(605) 335-8448

The firm is best-known for educational and medical facilities, industrial/manufacturing facilities, office buildings and nursing/retirement communities. Various institutional projects accounted for 37 percent of the firm's work. The firm is currently at work on several school and higher-education projects in Minnesota, Wyoming and South Dakota. Staff has 160 employees. *Ronald W. Mielke, Pres.*

43 (43) **$7.50**

Hixon Inc.
25 Merchant St., #400
Cincinnati, OH 45246
(513) 771-5700

Hixon's work is divided equally between corporate office, hotel and retail projects, and food, dairy and pharmaceutical processing facilities. The firm has recently completed corporate headquarters in Ohio for Champion and Mercantile. The staff of this privately held firm has 100 employees. A total quality management program has been implemented. *J. Wickliffe Ach, Pres., CEO*

44 (—) **$7.29**

C.H. Guernsey and Co.
3555 N.W. 58th
Oklahoma City, OK 73112
(405) 947-5515

Approximately half of this firm's work involved military-related structures, including a variety of testing and training facilities at U.S. Air Force air bases. The staff of this employee-owned firm numbers 154, including 13 registered architects and 10 registered mechanical engineers. *Carl Stover, Pres., CEO; Darrell Overland, Exec. VP*

45 (42) **$6.11**

Allen & Hoshall
2430 Poplar Ave.
Memphis, TN 38112
(901) 327-8222

This privately held firm focuses on industrial and military facilities. In addition to its Memphis headquarters, the firm operates branch offices in Knoxville, Nashville, and Jackson, Miss. Recent projects include a corrosion-control hangar at Kelley AFB (Texas), a commissary at Camp Lejeune (N.C.) for the U.S. Navy, a detention facility in Hinds County, Miss., and a bank and office building in Sikeston, Mo. *Frank B. Gianotti III, Pres.*

46 (—) **$5.74**

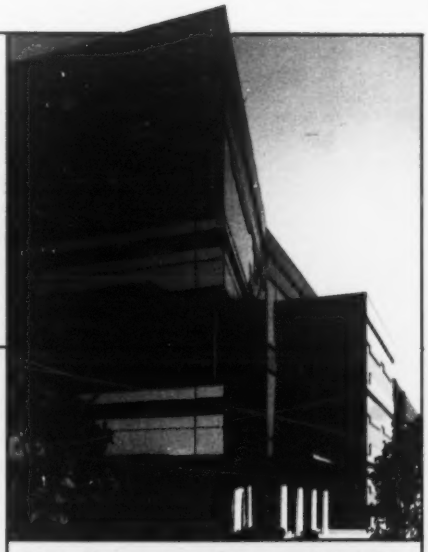
BPLW Architects & Engineers Inc.
2400 Louisiana Blvd., N.E.
Suite 400
Albuquerque, NM 87110
(505) 881-2759

In addition to its Albuquerque headquarters, the firm operates an office in Mesa, Ariz. Renovation work, especially in industrial facilities, has been increasing for this privately held firm, where it accounted for 80 percent of billings in 1991. Projects under way include four school additions and three new medical centers in New Mexico and Arizona. *William L. Burns, Pres., CEO*

47 (26) **$5.61**

Fru-Con Engineering Inc.
P.O. Box 100
Ballwin, MO 63022-0100
(314) 391-6700

During the past year the firm implemented a total quality management program. The staff of this privately held firm has 190 employees. The parent firm of Fru-Con Engineering is Fru-Con Construction Corp. An affiliate, Fru-Con Construction, is listed in the Contractors category of this year's survey. *Stephen L. Drawe, Pres.*



***Teng & Associates has completed** this 117,000-sq.-ft. maintenance facility for American Airlines at Chicago's O'Hare Airport.* Photo: Don DuBroff, Sadin Photo Group Ltd.

48 (—) **$5.38**

Osborn Engineering Co.
668 Euclid Ave.
Cleveland, OH 44114-3056
(216) 861-2020

In the C.I.I. buildings area, this firm is best-known for lab, manufacturing and sports facilities. Staff of 105 employees includes 20 registered structural engineers, eight registered architects and six registered mechanical engineers. Among major projects under way are a $20 million office building in Cleveland, an R&D facility in Wooster, Ohio, and renovations to numerous schools in Euclid, Ohio. *Robert M. Namen, Pres., CEO; George R. Shilling, Chmn., COO*

***Hixon provided architectural, engineering** and interior design for the Knightsbridge Campus of Champion International Corp. in Hamilton, Ohio.* Photo: Cam-Tech

49 (34) **$5.34**

Gee & Jensen Inc.
P.O. Box 24600
West Palm Beach, FL 33416
(407) 683-3301

Gee & Jensen's marketing emphasis includes waterfront facilities, light manufacturing/office buildings, libraries, educational and governmental facilities, and roof consulting. In addition to the West Palm Beach headquarters, the firm has branch offices in seven other Florida locations. The firm's total billings for 1991 were $15.25 million, of which only the 35 percent involving C.I.I. buildings is relected in the dollar volume reported above. *Fred A. Greene, Chmn., Pres.*

50 (—) **$5.13**

Teng & Associates Inc.
220 S. State St.
Chicago, IL 60604
(312) 341-0101

This privately held firm focuses on facilities for clients in the aviation, food, telecommunications and public sectors. Staff of 135 employees includes 15 registered architects and 11 registered structural engineers. Recent projects at Chicago's O'Hare Airport include a 117,000-sq.-ft. office and vehicle maintenance facility for American Airlines, and renovation/expansion of a flight kitchen for United Airlines. *Wayne C. Teng, Pres.*

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ENGINEERS

ENGINEERS' TOTAL BILLINGS DECLINE BY 3 PERCENT
Increases in institutional and industrial billings help to offset declines in commercial work

1
(1)
$486.67

Fluor Daniel Inc.
3333 Michelson Drive
Irvine, CA 92730
(714) 975-2000

Firm is also listed in the Contractors and Construction Managers categories. The above billings do not reflect all of the firm's activity, 29 percent of which is conducted outside of the U.S. Staff includes 350 structural, 425 mechanical and 150 electrical engineers worldwide. Recent projects include the Charlotte Convention Center in North Carolina and an aluminum recycling center in Oswego, N.Y. *Vince Kontny, Pres., CEO*

2
(2)
$341.00

United Engineers & Constructors
30 S. 17th St.
Philadelphia, PA 19101
(215) 422-3000

Firm is also listed in the Contractors category. The publicly held firm expanded regional operations by opening new offices in Knoxville, Tenn., Englewood, Colo., Richmond, Va., Winston-Salem, N.C., and Tampa, Fla. Recent projects include a research facility for Eastman Kodak, a $45 million research facility for Florida State University and a biotechnology facility for Baxter Healthcare. *Charles Miller, Pres., CEO*

3
(—)
$147.95

Burns and Roe Enterprises
800 Kinderkamack Road
Oradell, NJ 07649
(201) 265-2000

The firm is a new listing this year. With offices in Washington, D.C., Orlando, Fla., and Cypress, Calif., firm employs 1,800, including more than 200 registered engineers. Major marketing emphasis is on high-tech labs and clean rooms. Recent projects include a $27 million high school renovation in Brooklyn, N.Y.; a new $3 million research facility in Gainesville, Fla.; and a $17 million hotel and conference center in Orlando, Fla. *K. Keith Roe, Chmn., Pres.*

4
(3)
$106.58

BE&K Inc.
2000 Int'l Park Drive
Birmingham, AL 35243
(205) 972-6000

Firm is also listed in Contractors category. Mechanical/electrical engineering accounts for 60 percent of design billings. Recent projects for this privately held firm include the $27 million Dominion Bank Shares Tower in Roanoke, Va.; a $6 million regional office for BASF in Charlotte, N.C.; and a new $90 million print de-inking facility in Lock Haven, Pa. Reconstruction work accounts for 50 percent of the firm's activity. *Ted C. Kennedy, Chmn., CEO*

5
(5)
$62.21

Morrison Knudson Corp.
1 Morrison Knudson Plaza
Boise, ID 83707
(208) 386-5000

This publicly held firm is also listed in the Construction Managers and Contractors categories. Engineering work concentrated on industrial projects, which accounted for 53 percent of design billings. Firm reported that institutional projects supplied 4 percent of engineering billings this year. Mining, refining and chemical plant engineering, which are not included in the figure above, accounted for 38 percent of billings. *William Agee, Chmn., CEO*

6
(12)
$36.60

Bechtel Group Inc.
50 Beale St.
San Francisco, CA 94119
(415) 768-1234

The above figure does not include 51 percent of the firm's billings, which are for foreign projects. Federal, state and local government projects accounted for 29 percent of firm's work last year and reconstruction projects accounted for 21 percent. Recent projects include test facilities at the Toyota Proving Ground in Arizona and the Burroughs-Wellcome Sterile Products Facility in North Carolina. *Riley Bechtel, Pres.*

7
(11)
$35.02

Parsons Brinckerhoff
One Penn Plaza
New York, NY 10119
(212) 465-5000

This employee-owned firm added almost 300 people to its staff, which now exceeds 3,000. Structural engineering accounts for 16 percent of the firm's work, while mechanical/electrical work accounts for 5 percent. Recent C.I.I. projects include the design review of U.S. Postal service buildings in Boston and Waltham, Mass., and Hartford, Conn. Firm also conducted design review and evaluation of a Dept. of Energy facility in Washington, D.C. *James Lammie, CEO*

8
(8)
$31.50

Syska & Hennessy Inc.
11 W. 42nd St.
New York, NY 10036
(212) 921-2300

Last year the firm placed greater emphasis on small-scale projects and vertical and horizontal transportation engineering. A new president was appointed by the firm, which has a total staff of 340, including 70 mechanical and 72 electrical engineers. Recent projects include the $30 million New Jersey State Aquarium and the $280 million Los Angeles Convention Center expansion. *John F. Hennessy, Chmn., CEO; Alan Abramson, Pres.*

Parsons Brinckerhoff provided engineering services for the construction of stations for the Downtown Seattle Transit Project.

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ENGINEERS

9 (9) **$29.50**
Flack + Kurtz Consulting Engineers
475 Fifth Ave.
New York, NY 10017
(212) 532-9600

Stadiums and arenas accounted for 10 percent of the work for this privately held mechanical/electrical firm. Projects include the renovation of New York City's Madison Square Garden, and the design of new 20,000-seat arenas for Philadelphia, Phoenix, Chicago and Portland. Last year the firm initiated a joint-venture partnership with Integ, a Berlin, Germany-based engineering firm. *Peter Flack, Norman Kurtz, Managing Ptnrs.*

10 (10) **$26.32**
Martin Associates Group Inc.
1800 Wilshire Blvd.
Los Angeles, CA 90057
(213) 483-6490

This structural engineering firm specializes in long-span, special and high-rise buildings. Specialties also include seismic and rehab analysis. Commercial and institutional work accounted for 97 percent of the firm's work. The figure listed above does not include the 6 percent of the firm's work that was performed on foreign projects. *John A. Martin, CEO*

Mechanical and electrical engineer Flack + Kurtz provided design services for the construction of Chicago's new Comiskey Park, which opened last year.

11 (—) **$19.59**
Harris Group Inc.
2901 3rd Ave.
Seattle, WA 98121
(206) 443-4600

The firm is a new addition to the list. Firm specialties include buildings and structures for the aerospace and pulp & paper industries. Industrial buildings account for 57 percent of the firm's work. No commercial or institutional work was reported. With offices also in Portland, Ore., Bellingham, Wash., Appleton, Wisc., and Denver, the firm employs a staff of 400. *Robert Harris, Chmn., CEO; Terry Valo, Pres.*

14 (34) **$12.09**
Carter & Burgess Inc.
1100 Macon St.
Fort Worth, TX 76102
(817) 335-2611

The privately held firm added 70 people to its staff as C.I.I. billings almost doubled. Institutional work doubled to 32 percent of total billings while commercial projects more than doubled to 19 percent of all work. Government projects now make up 43 percent of firm's total work. Firm also has offices in four other Texas cities and in Fort Myers, Fla. *Jerry Allen, Pres., CEO*

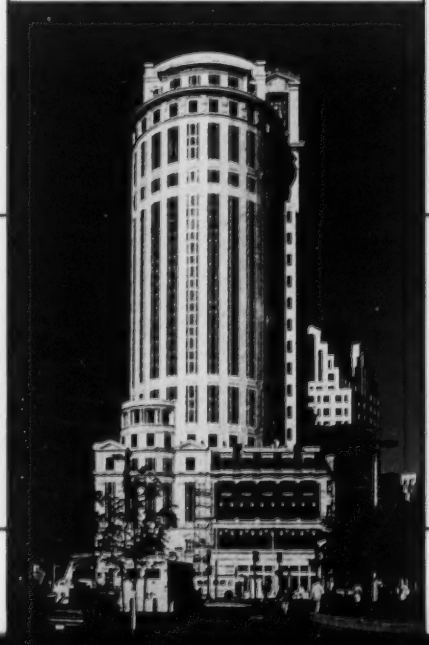
15 (20) **$11.45**
Smith Seckman Reid Inc.
3319 Westend Ave.
Nashville, TN 37203
(615) 383-1113

An office in Fort Lauderdale, Fla., was opened by the firm last year. Reconstruction work accounted for 50 percent of the firm's projects. Mechanical/electrical engineering accounted for 87 percent of the firm's design billings. Projects include a $30 million mail facility in Raleigh, N.C.; an $80 million IRS service center in Memphis, Tenn.; and a $70 million Women's Center at Herman Hospital in Houston. *J. Robin Barrick, Pres., CEO*

12 (14) **$15.70**
R.G. Vanderweil Engineers
266 Summer St.
Boston, MA 02210
(617) 423-7423

This mechanical/electrical engineering firm recently acquired BioMetics, a biotechnology firm that validates the sterility of laboratories. Recent projects include redevelopment of Boston's 300,000-sq.-ft. Prudential Center retail mall, a 330,000-sq.-ft. science center in Durham, N.C., and a 160,000-sq.-ft. museum in Atlanta. *Gary Vanderweil, Pres.*

A recently completed R.G. Vanderweil Engineers project is the 32-story 125 Summer Street office building in Boston.



16 (17) **$10.39**
Rolf Jensen & Assoc.
1751 Lake Cook Road
Deerfield, IL 60015
(708) 948-0700

The figure above does not include almost $2 million in revenues that were derived from projects outside of the U.S. Firm conducted fire protection engineering and code consultation for projects including New York's Kennedy airport redevelopment, the Charlotte Performing Arts Center in North Carolina and the J. Paul Getty Center Museum in Los Angeles. Only 4 percent of the firm's work is for industrial buildings. *Rolf Jensen, Pres.*

13 (15) **$12.50**
AVCA Corp.
5855 Monroe St.
Sylvania, OH 43560
(419) 885-2822

Staff increased by 50 to a total of 284 last year. Industrial buildings accounted for 75 percent of the firm's work. Commercial projects accounted for 10 percent of the firm's work and institutional projects contributed 5 percent. Projects include an $8.5 million health emergency center in Sylvania, Ohio. Offices are also located in Lima, Ohio, and Battle Creek, Mich. *William Christoffers, Pres., CEO*

17 (21) **$9.99**
KPFF Consulting Engineers
1201 Third Ave.
Seattle, WA 98101
(206) 622-5822

Reconstruction work accounted for only 5 percent of this structural engineer's work last year. C.I.I. billings rose by slightly more than 5 percent. Commercial and institutional projects continue to make up the majority of the firm's work. Recent projects include a 22-story high-rise, a corporate headquarters for U.S. West and the seismic upgrade of the Exchange Building, all in Seattle. *David T. Thomas, Pres.*

18 **Paulus Sokolowski and Sartor Inc.**
(19) **P.O. Box 4039**
$9.84 **Warren, NJ 07059**
(201) 560-9700

The firm reported an increased-effort marketing their health care and pharmaceutical experience. The staff of 140 includes 20 structural, nine mechanical and nine electrical engineers. Government projects accounted for 20 percent of the firm's business last year. The firm anticipates 1992 revenues to increase by 20 percent compared to 1991. *William Paulus Jr., Pres.; Anthony Sartor, Exec. VP*

Billings for the top four engineering positions increased by $56 million, while those for the remaining 36 positions collectively decreased by $105 million

19 **Simpson Gumpertz & Heger Inc.**
(16) **297 Broadway**
$9.45 **Arlington, MA 02174**
(617) 643-2000

Almost 50 percent of the structural engineering firm's work is for reconstruction projects. Government projects make up almost 40 percent of the firm's work. Projects include a structural survey of Quincy Market in Boston and an investigation of structural damage at a courthouse in Florida. An office is also located in San Francisco. *Werner Gumpertz, Pres.; Howard Simpson, Treas.; John Nevins, Clerk*

20 **Joseph R. Loring & Assoc.**
(18) **1 Pennsylvania Plaza**
$9.16 **New York, NY 10119**
(212) 563-7400

The firm provides mechanical, electrical, plumbing, fire protection and vertical transportation engineering services. The above figure does not include almost $500,000 in overseas work performed in association with U.K. affiliate, Oscar Faber. Recent U.S. projects include a $98 million psychiatric center in the Bronx, N.Y.; a $20 million student activities center in Stony Brook, N.Y.; and a $23 million courthouse in Essex, N.J. *Joseph R. Loring, Chmn., CEO*

21 **Robson & Woese Inc.**
(23) **P.O. Box 0606**
$8.52 **East Syracuse, NY 13057**
(315) 445-2650

Billings estimated by *BD&C*. Sixty percent of the firm's work is for institutional projects, 25 percent is for commercial buildings and 7 percent is for industrial projects. Figure above does not include more than $500,000 in billings for utility plants. This mechanical/electrical engineer derives 65 percent of its work from reconstruction projects. *Philip French, Chmn.; Theodore Knowles, Pres.*

22 **Affiliated Engineers Inc.**
(29) **625 N. Segoe Road**
$8.36 **Madison, WI 53705**
(608) 238-2616

Staff increased by more than 20 to a total of 133 in five offices nationwide. Recent projects include a Center for Performing Arts at the University of Wisconsin in Green Bay, an R&D laboratory in Ridgefield, Conn., and the national headquarters for American Family Insurance in Madison, Wis. Reconstruction accounts for 40 percent of firm's work. *Peter E. Starkweather, Pres.*

23 **Construction Technology Laboratories Inc.**
(—) **5420 Old Orchard Road**
$7.93 **Skokie, IL 60077**
(708) 965-7500

The firm is a new addition to the list this year. Structural engineering accounts for 70 percent of total billings for the firm, which performs analysis of buildings and building components. Placing a stronger marketing emphasis on commercial buildings, last year the firm added architectural engineering of curtain walls and windows as a new service. *John Fraczek, Pres.; W. Gene Corley, VP; Henry Russell, VP*

24 **Newcomb & Boyd**
(27) **One Northside 75**
$7.68 **Atlanta, GA 30318**
(404) 352-3930

This privately held firm provides electrical, mechanical, acoustical and fire protection engineering. Staff totals 125, including 19 mechanical and five electrical engineers. Recent projects include a $250 million airport expansion in Cincinnati, a $65 million federal prison in Beckley, W.V., and a $25 million hospital addition in Atlanta. Reconstruction accounts for almost 25 percent of the firm's work. *Warren D. Shiver, Ptnr.*

25 **Weidlinger Associates**
(26) **333 Seventh Ave.**
$7.36 **New York, NY 10001**
(212) 563-5200

With branch offices located in Arlington, Va., and Los Angeles, firm employs a total staff of 168. Specialties include seismic, long-span and high-rise structural design. Institutional projects account for 50 percent of the firm's work. Projects include a cargo storage building at Kennedy Airport in New York City and the World Bank headquarters addition in Washington, D.C. *Paul Weidlinger, Matthys Levy, Herbert Rothman, Prins.*

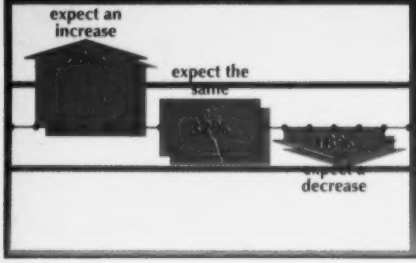
26 **Schirmer Engineering Corp.**
(28) **707 Lake Cook Road**
$6.97 **Deerfield, IL 60015**
(708) 272-8340

This fire protection engineering firm and code consultant has 103 employees in five offices. Services also include loss control inspections and risk management. Commercial projects make up 57 percent of the firm's work while institutional buildings account for 24 percent and industrial buildings 12 percent. Recent projects include the McCormick Place expansion in Chicago and the Hyatt Regency in Dallas. *Richard Osman, Pres.*

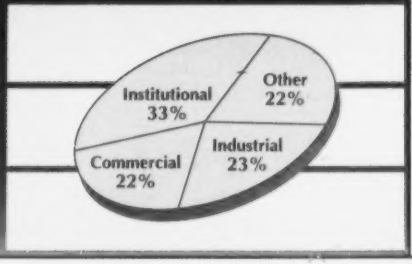
27 **I.A. Naman + Assoc. Inc.**
(30) **Two Greenway Plaza**
$6.65 **Houston, TX 77046**
(713) 623-0220

Commercial projects account for 75 percent of the work for this mechanical/electrical engineering firm. Recent projects include the $75 million One Detroit Center, a $200 million high-rise in Los Angeles and the $75 million 191 Peachtree high-rise in Atlanta. The firm reported no government work for 1991. Reconstruction projects accounted for 30 percent of the firm's work. *Philip Sheridan, Chmn.; Walter Richardson, Pres.*

What is the Engineers' Outlook for Revenues in 1992?



Breakdown of the Engineers' Billings



28 **Walter P. Moore and Associates Inc.**
(31) **3131 Eastside**
$6.36 **Houston, TX 77098**
(713) 630-7300

Staff includes a total of 100 employees in five offices. More than 30 percent of this structural engineer's work involves sports stadiums, convention centers and other public-use projects. Recent projects include a new $70 million baseball park for the Texas Rangers, a $200 million convention center in Orlando and a $220 million cancer treatment center in Houston. *Walter P. Moore, Chmn., Pres.*

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ENGINEERS

29 (36) $6.24
H.F. Lenz Co.
1732 Lyter Drive
Johnstown, PA 15905
(814) 255-5821

Last year the firm opened a branch office in Melbourne, Fla. Staff now totals 150, up from 112 last year. This privately held firm focuses mainly on mechanical/electrical engineering projects and derived 35 percent of its work from government projects and 55 percent from reconstruction work. Recent projects include the National Drug Intelligence Center in Johnstown, Pa., and a $30 million hospital in Altoona, Pa. *Charles J. Neuhoff, Pres.*

30 (—) $5.91
Wilbur Smith Assoc. Inc.
P.O. Box 92
Columbia, SC 29202
(803) 738-0580

The firm is a new listing this year. Figure above does not include more than $10 million in billings for foreign projects. It also does not include a considerable amount of non-C.I.I. work. More than 80 percent of the firm's work is for government projects. C.I.I. projects include numerous school and university buildings. More than 25 branch offices are located in the U.S. *Robert Hubbard, Chmn., Pres; Ken Corley, CFO*

31 (32) $5.89
LeMessurier Consultants
1033 Massachusetts Ave.
Cambridge, MA 02238
(617) 868-1200

The employee-owned structural engineer created a Chicago office in 1991. Commercial buildings accounted for 55 percent of firm's billings last year while institutional projects made up 25 percent. Recent projects include a $138 million federal courthouse and the $45 million redevelopment of Prudential Center, both in Boston, and a $20 million museum in Atlanta. *William LeMessurier, Chmn.; Mysore Ravindra, Pres.*

32 (—) $5.84
Heapy Engineering
200 S. Keowee St.
Dayton, OH 45402
(513) 224-0861

This mechanical/electrical engineer is a new addition to the list. Another office is located in Columbus, Ohio. Total staff includes 100 employees. Eighty percent of billings were for institutional projects in 1991. Only 25 percent of work is for government bodies. Recent projects include a $10 million humanities facility at the University of Dayton, and a $40 million hospital addition in Kettering, Ohio. *Thomas Ferdelman, Ptnr., Exec. Dir.*

33 (—) $5.63
Peter F. Loftus Division
6585 Penn Ave.
Pittsburgh, PA 15206
(412) 363-9000

A division of Eichleay Holdings, the mechanical/electrical/structural engineering firm employees a staff of 85. Firm's emphasis is on hospital and light industrial projects. Government buildings account for 40 percent of the firm's work. Recent projects include the $24 million Westmoreland County Correctional Facility in Pennsylvania and a $25 million addition at the Shadyside Hospital in Pittsburgh. *Samuel Lyon, Pres.*

34 (33) $5.10
Lowry-Sorensen-Willcoxson Engineers Inc.
2333 W. Northern Ave.
Phoenix, AZ 85021
(602) 249-1320

Government work again accounts for 50 percent of business after dropping to 15 percent in 1991. The 61-person engineering firm includes 10 mechanical and seven electrical engineers. Industrial buildings account for 70 percent of the firm's billings. An $80 million dormitory at Fort Huachuca, Ariz., is under construction. *Robert J. Willcoxson, CEO; Richard Heitz, Pres.; Paul Sorensen, Exec. VP*

35 (35) $5.02
Skilling Ward Magnusson Barkshire Inc.
1420 Fifth Ave.
Seattle, WA 98101 (206) 292-1200

The figure above does not include more than $3.5 million in foreign billings, a growing portion of the firm's work. Industrial projects accounted for 63 percent of the structural engineering firm's billings. Recent projects include a $58 million paint hangar for Boeing in Everett, Wash., a $77 million hospital addition in Seattle and the state's Ecology Building in Lacey. *John Skilling, Chmn.; Jon Magnusson, CEO; Arthur Barkshire, Pres.*

36 (—) $4.77
The RMH Group Inc.
12600 W. Colfax
Lakewood, CO 80215
(303) 239-0909

The 70-person firm is a new addition to the list this year. Last year the mechanical/ electrical engineering firm created a separate industrial department. Industrial projects accounted for 22 percent of the firm's billings. Government projects made up almost 50 percent of the firm's work. Recent projects include a $185 million federal corrections complex in Florence, Colo., and the $63 million San Jose Sports Arena in California. *Tom Moore, Pres.*

37 (—) $4.68
DiClemente-Siegel Engineering Inc.
28105 Greenfield
Southfield, MI 48076
(313) 569-1430

The privately held firm is a new addition to the list this year. The firm specializes in mechanical/ electrical engineering for manufacturing, commercial, educational and health care facilities. Reconstruction accounts for 70 percent of the firm's work. Recent projects include a $7 million glass plant in Detroit for Chrysler and a $20 million test lab for Ford. *Gino DiClemente, Pres.; Louis Trama, Exec. VP*

38 (38) $4.58
Goetting & Assoc. Inc.
70 N.E. Loop 410
San Antonio, TX 78216
(512) 349-2477

Government projects make up 35 percent of the firm's work. Recreational and entertainment facilities accounted for 10 percent of the firm's billings, down from 25 percent in 1990. Recent projects include the $35 million Retana Park racetrack in San Antonio, and an $11 million office building for Citibank Data Systems and a $34 million Veterans Administration hospital, both in El Paso. *Fred Goetting, Chmn.; Louis Rowe, Pres.*

39 (37) $4.55
R.E. Warner & Associates
2001 Crocker Road
Westlake, OH 44145
(216) 835-9400

Industrial building projects made up 40 percent of the firm's billings. Reconstruction projects accounted for 80 percent of the employee-owned firm's work. The firm employs eight structural, six mechanical and seven electrical engineers on its staff of 141. Recent projects include a physical and social science classroom building in Elyria, Ohio. *Vincent Traina, CEO; Donald Klebe, Pres.*

40 (—) $4.32
Bala Consulting Engineers
259 E. Lancaster Ave.
Wynnewood, PA 19096
(215) 649-8000

The full-service engineering firm is a new addition to the list this year. With branch offices in Washington, D.C., Philadelphia and Princeton, N.J., the firm has a total staff of 80 employees. Foreign work contributed $500,000 to total billings which is not reflected in the figure above. Recent projects include a $1.8 million lab for Merck & Co. and a $2.5 million renovation for Bristol-Myers Squibb Co. *Michael Anastasio, Pres.; Joseph Piunti, VP; William Krysiak, VP*

The 240,000-sq.-ft. University Center at Carnegie Mellon University in Pittsburgh was engineered by Peter F. Loftus Division.

CONSTRUCTION MANAGERS

CONSTRUCTION VOLUME FALLS 5.6 PERCENT
Airports and other large public projects are a good market for the CMs

1
(1)
$4,981.50

CRSS Inc.
1177 West Loop South
Houston, TX 77027
(713) 552-2000

Firm also is listed in the Engineer/Architects category. Current projects include a $140 million state prison reception center in Wasco, Calif., a $172 million U.S. Federal Building and Courthouse in Los Angeles, a 132-school construction and renovation program in Denver, and a $105 million Child's Health and Neuroscience Building at the National Institutes of Health in Bethesda, Md. *Bruce Wilkinson, Chmn., CEO*

2
(3)
$1,104.47

Gilbane Building Co.
7 Jackson Walkway
Providence, RI 02940
(401) 456-5800

Current projects include the $81 million Rhode Island Convention Center in Providence; the nine-building, $259 million Sterling Winthrop Pharmaceuticals research complex in Upper Providence Township, Pa.; a new $322 million International Terminal at O'Hare International Airport in Chicago; and the $215 million, 1.7 million-sq.-ft. National Archives Facility in College Park, Md. *Paul Choquette Jr., Pres.*

3
(7)
$960.69

Lehrer McGovern Bovis Inc.
387 Park Ave. South
New York, NY 10016
(212) 576-4000

Firm is the U.S. construction arm of the London-based Bovis Construction Group. Current projects include the $160 million U.S. Courthouse at Foley Square in New York City, a $45 million Merck biosupport laboratory in West Point, Pa., a $45 million terminal renovation at Westchester County (N.Y.) Airport, and the recently opened Euro Disneyland near Paris. *Peter Lehrer, Chmn.; James D'Agostino, Pres.*

4
(4)
$910.60

Sverdrup Corp.
13723 Riverport Drive
Maryland Heights, MO 63043
(314) 436-7600

Current projects include the new $105 million Baltimore Orioles baseball stadium (in association with Barton Malow Co.), a six-year capital improvement program to renovate the World Bank's main complex in Washington, D.C., a new federal courthouse in Alexandria, Va., and a $486 million facilities improvement program for the eastern region of the U.S. Postal Service (in joint venture with Gilbane). *Brice Smith Jr., Chmn., CEO*

5
(10)
$665.36

Fluor Daniel
3333 Michelson Drive
Irvine, CA 92730
(714) 975-2000

Company also is listed in the Engineers and Contractors categories. Current projects include a $150 million convention center for the city of Charlotte, N.C., a 280,000-sq.-ft. high school in Simpsonville, S.C., a $12 million biotech facility for Hoffman-LaRoche in Nutley, N.J., and a $35 million bakery for Pillsbury Co. in Murfreesboro, Tenn. *Vincent Kontny, Pres., CEO*

6
(6)
$631.75

Tishman Realty & Construction Co.
666 Fifth Ave.
New York, NY 10103
(212) 399-3600

Current projects include the 38-story Swiss Bank Corp. office building, the renovation of the St. Regis Hotel and the restoration of the Metro-North waiting room at Grand Central Terminal, all in New York City; expansion and renovation of the Kilmer general mail facility in Edison, N.J.; and interior development of 500,000 square feet of office space for Merrill Lynch. *John Tishman, Chmn., CEO*

7
(2)
$580.00

Daniel, Mann, Johnson & Mendenhall (DMJM)
3250 Wilshire Blvd.
Los Angeles, CA 90010
(213) 381-3663

Firm also is listed in the Engineer/Architects category. Current projects include a nationwide $1.5 billion U.S. Postal Service capital improvement program, a $500 million modernization program at the Pentagon, and a $250 million terminal expansion program at Buffalo (N.Y.) Airport (a joint venture with O'Brien-Kreitzberg & Associates and Frederic R. Harris Inc.). *M. Paul Brott, Pres., CEO*

8
(8)
$489.25

Barton Malow Co.
2777 Franklin Road
Southfield, MI 48034
(313) 351-4500

Current projects include the $105 million Baltimore Orioles stadium (in joint venture with Sverdrup Corp.), a $375 million Chrysler assembly plant in Detroit, the Troy (Mich.) High School, a $507 million terminal renovation/expansion at Detroit Metropolitan Airport, and the $174 million Georgia Dome in Atlanta (a joint venture with Beers Inc., H.J. Russell Construction Co. and Holder Construction Co.). *Ben Malbach, Pres.*

9
(5)
$460.24

Morrison Knudsen Corp.
1 Morrison Knudsen Plaza
Boise, ID 83707
(208) 386-8000

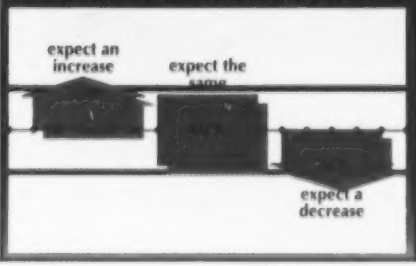
Company also is listed in the Contractors category. Current projects include the management of $90 million of expansion and safety improvement projects at BASF facilities in Ohio and Michigan, a $20 million Glaxo pharmaceutical facility at Research Triangle Park, N.C., and a new Du Pont Co. polyester film manufacturing plant in Circleville, Ohio. *William Agee, Chmn., CEO*

10
(—)
$427.50

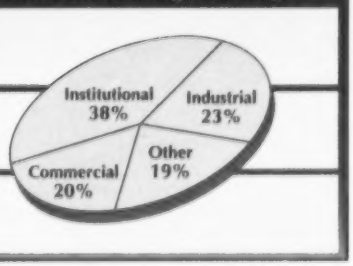
Mellon Stuart Construction Inc.
One North Shore Center
Pittsburgh, PA 15212
(412) 323-4600

Company also is listed in the Contractors category. Current projects include a 1.6 million-sq.-ft. corporate headquarters for Merck and Co. in Readington Township, N.J., infrastructure development for Disney Development Co. in Orlando, and a $63 million laboratory/office building for Miles Laboratories Inc. in West Haven, Conn. *Robert Luffy, Pres.*

What is the Construction Managers' Outlook for Revenues in 1992?



Breakdown of the Construction Managers' Billings



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CONTRACTORS

RECONSTRUCTION RISES TO 21 PERCENT OF VOLUME

Public projects jump from 18 to 26 percent of construction put in place during 1991

***J.A. Jones Construction Co. was general contractor** for the Toyota Technical Center in Ann Arbor, Mich. It built a second Toyota center in California.*

Photo: B. Korab

1 (1) **$2,383.81**

The Turner Corp.
375 Hudson St.
New York, NY 10014
(212) 229-6000

Company completed 185 buildings in the U.S. in 1991, representing a total of 25.7 million square feet. It had 1,200 active U.S. projects (including interiors work), with an average job size of $7.7 million. Projects completed last year include the 450 Lexington Avenue office building in New York City. *Alfred McNeill, Chmn., Turner Corp.; Harold Parmelee, Pres., Turner Construction Co.*

2 (—) **$1,698.39**

The Austin Co.
3650 Mayfield Road
Cleveland, OH 44121
(216) 382-6600

Company was listed last year in the former Design/Builders category. All work was performed on a design/build basis. Current projects include an assembly plant for Boeing Co. in Everett, Wash., a $300 million research center for Upjohn Co. in Kalamazoo, Mich., and a technical center for Best Foods Division of CPC International in Franklin Township, N.J. *Thomas Judge, Chmn.; J. William Melsop, Pres.*

3 (12) **$1,407.50**

Fluor Daniel Inc.
3333 Michelson Drive
Irvine, CA 92730
(714) 975-2000

Volume includes $946 million of design/build work. Firm also is listed in the Engineers and Construction Managers categories. Current projects include a Ford Motor Co. paint shop expansion in Oakville, Ontario, a $70 million Bowater Inc. fiber recycling plant in Calhoun, Tenn., and a $400 million expansion of a Federal Paper Board paper manufacturing facility in Augusta, Ga. *Vincent Kontny, Pres., CEO*

4 (5) **$910.00**

J.A. Jones Construction Co.
6060 St. Albans St.
Charlotte, NC 28287
(704) 553-3000

Volume includes $105 million of design/build work. Known in recent years as Jones Construction Group, firm has reverted to use of its original name. Current projects include the 60-story One Peachtree Center in Atlanta, the $162 million Manhattan Post Office in New York City and the $130 million Judiciary Office Building in Washington, D.C. Parent firm is German-based Philipp Holzmann AG. *Johnie Jones, Pres., Chmn.*

5 (4) **$900.05**

Centex Construction Group
3333 Lee Parkway
Dallas, TX 75219
(214) 559-6500

Volume includes $46.5 million of design/build work. Current projects include a $180 million, 1.5 million-sq.-ft. Veterans Administration Medical Center in Houston; the $54 million Mary Washington Hospital in Fredericksburg, Va.; the $27 million Chatham County Detention Center in Savannah, Ga.; and Dixie Landings, a 340-acre Disney development near Walt Disney World, Fla. *William Gillilan, Pres., CEO*

6 (3) **$895.44**

Fletcher Construction (U.S.A.) Ltd.
707 Richards St.
Honolulu, HI 96813
(808) 521-7861

Company is a subsidiary of New Zealand-based Fletcher Construction Co. Ltd. Its subsidiaries include Pacific Construction Co., Honolulu; Wright Schuchart Inc., Seattle; and Dinwiddie Construction Co., San Francisco. Current projects include the 306-unit, $92 million Nauru Tower condominium in Honolulu and the Wailea Suites hotel in Maui, Hawaii. *David Chandler, Managing Dir.*

7 (2) **$884.53**

The Clark Construction Group Inc.
7500 Old Georgetown Road
Bethesda, MD 20814
(301) 657-7100

Volume includes $28 million of design/build work. Current projects include renovation of the 30th Street Station in Philadelphia, a $99 million Veterans Administration hospital in Baltimore, the $76 million Palm Beach County (Fla.) Judicial Center and the $139 million National Archives Building in College Park, Md., to be completed in 1993. *A. James Clark, Chmn., CEO*

8 (8) **$799.16**

BE&K Inc.
2000 International Park Drive
Birmingham, AL 35243
(205) 969-3600

Company also is listed in the Engineers category. Volume includes $225 million of design/build work. Current projects include a $250 million upgrade at a Champion International paper mill in Canton, N.C., the $24 million Dominion Bank Shares Tower in Roanoke, Va., and a $6.4 million regional office for BASF Corp. in Charlotte, N.C. *Ted Kennedy, Chmn., CEO*

9 (—) **$702.00**

United Engineers & Constructors
30 S. 17th St.
Philadelphia, PA 19101
(215) 422-3000

Volume includes $611 million of design/build work. Company was listed last year in the former Design/Builders category. Current projects include the $550 million I/N Kote steel galvanizing plant in New Carlisle, Ind., and the Amgen biomedical research facility in Thousand Oaks, Calif. Government work was 20 percent of total volume. *Charles Miller, Pres.*

10 (13) **$561.55**

M.A. Mortenson Co.
700 Meadow Lane North
Minneapolis, MN 55440
(612) 522-2100

Current projects include a $47 million terminal and concourse improvement at Seattle-Tacoma Airport, to be completed this fall; a $31 million addition at Milwaukee County Medical Center, and a $36 million aircraft painting facility for Boeing Co. in Everett, Wash., both to be completed in 1993; and a $54 million medical facility at Nellis Air Force Base in Las Vegas, to be completed in 1994. *M.A. Mortenson Jr., Pres., CEO*

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CONTRACTORS

11 (—) **$557.27**
SAE America Inc.
7200 Wisconsin Ave.
Bethesda, MD 20814
(301) 907-0211

Volume includes $110 million of design/build work. Major subsidiaries include SAE Carlson Design/Construct and SAE Americon, both of Boston; SAE Pinkerton & Laws, Atlanta; SAE Spaw-Glass, Houston; and SAE Continental Heller, Sacramento, Calif. Current projects include an $18 million SmithKline Beecham laboratory in Tucker, Ga., and a $35 million postal facility expansion in Waltham, Mass. *Ronald Taylor, Pres.*

12 (11) **$552.00**
McCarthy
1341 N. Rock Hill Road
St. Louis, MO 63124
(314) 968-3300

Current projects include the $165 million Dartmouth-Hitchcock Medical Center in Hanover, N.H., the $55 million Scottsdale (Ariz.) Galleria shopping and entertainment complex, a $38 million Burn Institute at Shriners Hospitals for Crippled Children in Galveston, Texas, a $94 million new bed tower at University Hospitals of Cleveland (Ohio), and the $16 million St. Louis Marriott West Hotel. *Michael McCarthy, Chmn.*

13 (9) **$519.36**
Perini Corp.
73 Mt. Wayte Ave.
Framingham, MA 01701
(508) 875-6171

Volume includes $38 million of design/build work. Current projects include the $80 million Nassau County Correctional Center in Hempstead, N.Y., the $20 million Boston College Science Center in Chestnut Hill, Mass., a $30 million renovation of Prudential Center in Boston, and a nine-story Federal Office Building/International Cultural and Trade Center in Washington, D.C., to be completed in 1995. *David Perini, Chmn., Pres.*

14 (25) **$493.11**
Walbridge Aldinger
613 Abbott St.
Detroit, MI 48226
(313) 963-8000

Current projects include the 44-story One Detroit Center office building in Detroit, the $30 million Calhoun County Correctional Facility and Justice Center in Battle Creek, Mich., the $750 million Chrysler Technology Center in Auburn Hills, Mich., and a $42 million scientific research laboratory for Ford Motor Co. in Dearborn, Mich. *John Rakolta Sr., Chmn.; John Rakolta Jr., Pres.*

15 (6) **$478.70**
McDevitt Street Bovis
One Parkway Plaza
Charlotte, NC 28232
(704) 357-1919

Formerly known as McDevitt & Street, the firm was renamed in May to reflect its acquisition by Bovis Inc. in 1990. Current projects include the 60-story NationsBank Corporate Center in Charlotte, the 38-story Bristol Towers Condominiums in Miami, and 386,000 square feet of additions and renovations at Holston Valley Medical Center, Kingsport, Tenn. *Luther Cochrane, Chmn., CEO*

16 (—) **$456.40**
Charles Pankow Builders Ltd.
2476 N. Lake Ave.
Altadena, CA 91001
(213) 684-2320

Volume includes $431 million of design/build work. Current projects include an 800,000-sq.-ft. addition to Tyler Mall, Riverside, Calif.; the Four Seasons Resort in Carlsbad, Calif.; a second-level and food court addition at Roosevelt Field regional mall in Garden City, N.Y.; and a 10,000-seat arena at the University of Hawaii in Honolulu. *Charles Pankow, Chmn.*

17 (10) **$425.79**
Koll Construction Co.
4343 Von Karman Ave.
Newport Beach, CA 92660
(714) 833-3030

Volume includes $63 million of design/build work. Current projects include the 28-story 550 S. Hope Building in Los Angeles, a $37 million Sony Corp. office/R&D/warehouse facility in San Jose, the $60 million Fred Hutchinson Cancer Research facility in Seattle, and the $13 million renovation of the 22-story 811 Wilshire Building in Los Angeles. *John Wills, Pres.*

18 (39) **$414.00**
Morrison Knudsen Corp.
Morrison Knudsen Plaza
Boise, ID 83707
(208) 386-8000

Firm also is listed in the Construction Managers category. Volume includes $264 million of design/build work. Current projects include the design and construction of a 450,000-sq.-ft. manufacturing facility for Boeing Co., the engineering and construction of an Anheuser Busch brewery in Cartersville, Ga., and engineering and construction services for NASA's Lewis Research Center in Cleveland, Ohio. *William Agee, Chmn., CEO*

19 (20) **$390.23**
The Pepper Cos.
643 N. Orleans St.
Chicago, IL 60610
(312) 266-4703

Current projects include the $58 million Spiegel Inc. corporate headquarters in Downers Grove, Ill., an $18 million addition to Willow Creek Church, S. Barrington, Ill., a $42 million corporate headquarters addition for Kemper Insurance Co. in Long Grove, Ill., a $27 million Embassy Suites Hotel in Chicago, and a 417,000-sq.-ft. retail center on the first two floors of the Merchandise Mart in Chicago. *Richard Pepper, Chmn.*

20 (16) **$380.25**
Hensel Phelps Construction Co.
P.O. Box O
Greeley, CO 80632
(303) 352-6565

Volume includes $61 million of design/build work. Current projects include $33 million of improvements to the Veterans Administration hospital in Nashville, Tenn., the $20 million El Camino Hospital in Mountain View, Calif., a $6.8 million J.C. Penney store in Sunnyvale, Calif., the $89 million Harbor Island Hotel in San Diego, and the P/SL Medical Center in Denver. *Jerry Morgensen, Pres.*

21 (21) **$377.00**
Huber, Hunt & Nichols
P.O. Box 128
Indianapolis, IN 46206
(317) 241-6301

Volume includes $41 million of design/build work. Current projects include a $25 million expansion of the Mayo Clinic in Scottsdale, Ariz., an $8.4 million ambulatory service building at Methodist Hospital in Indianapolis, a $12.8 million U.S. Department of Agriculture forestry sciences complex in Flagstaff, Ariz., and a $49 million expansion of the Dallas Convention Center. *Bruce Bennett, Pres.*

McCarthy was general contractor for the Scottsdale (Ariz.) Galleria.

Contractors with the Top Design/Build Volumes (Millions)

1. The Austin Co.	$1,698.39
2. Fluor Daniel	946.86
3. United Engineers & Constructors	611.00
4. Fru-Con Construction Corp.	484.48
5. Charles Pankow Inc.	431.00
6. Marnell Corrao Associates	273.01
7. Morrison Knudsen Corp.	264.38
8. Opus Companies	250.00
9. Bechtel Corp.	238.50
10. BE&K Inc.	225.57
11. Sverdrup Corp.	159.87
12. Haskell Co.	154.00
13. Kajima International	137.39
14. James N. Gray Construction Co.	133.00
15. Marshall Erdman & Associates	123.00

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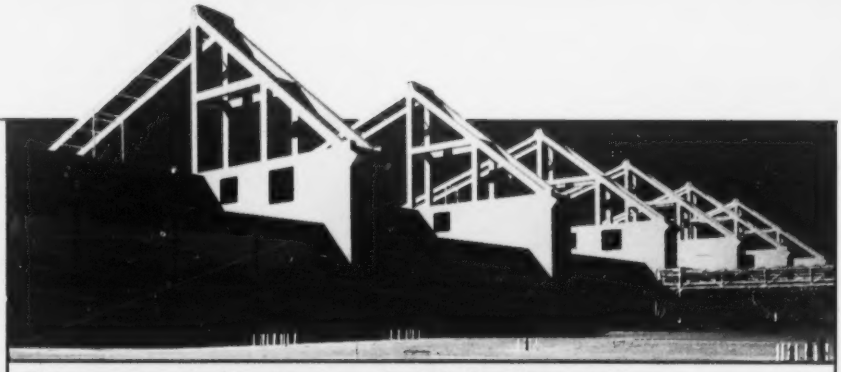


This American Airlines hangar at Fort Worth's Alliance Airport was constructed by HCB Contractors, in joint venture with Walker Building Corp. Photo: Wes Thompson

22 (19) **$354.33**

Morse Diesel International
1515 Broadway
New York, NY 10036
(212) 730-4000

Current projects include the 60-story, $102 million USG Corp. office building, the 27-story Metcalfe Federal Building (joint venture) and the $107 million Chicago Title & Trust Center, all in Chicago; and the $126 million New York University Biomedical Research Laboratory in New York City. Firm purchased interior renovation contractor NICO in September 1991. *Donald Piser, Chmn., CEO*

23 (14) **$347.60**

The Whiting-Turner Contracting Co.
300 E. Joppa Road
Baltimore, MD 21204
(410) 337-5766

Volume includes $12 million of design/build work. Current projects include a $6.6 million office addition to the *Baltimore Sun* printing plant, an $8.8 million office building renovation for Sandoz Pharmaceuticals in E. Hanover, N.J., and an $8.3 million renovation/addition to a State Farm Insurance Co. regional office in Costa Mesa, Calif. *Willard Hackerman, Pres.*

24 (26) **$338.10**

Beers Inc.
70 Ellis St., N.E.
Atlanta, GA 30303
(404) 659-1970

Current projects include the 56-story NationsBank Office Tower in Atlanta, the $43 million Roanoke (Va.) Memorial Hospital expansion/renovation, a $13 million city hall and library for Murfreesboro, Tenn., and the $19 million Fernbank Museum of Natural History in Atlanta. Firm is managing partner of the joint venture providing CM services for Atlanta's $175 million Georgia Dome. *Larry Gellerstedt III, Pres.*

25 (33) **$332.26**

Kajima International Inc.
2100 N. Central Road
Fort Lee, NJ 07024
(201) 944-9800

Volume includes $137 million of design/build work. Current projects include the 87,000-sq.-ft. Isuzu Technical Facility in Plymouth, Mich., a prototype 275,000-sq.-ft. Los Angeles County court facility designed for children, and the L-SII electro-galvanizing plant in Columbus, Ohio. Firm is the developer and joint venture contractor for the Florida Aquarium in Tampa. *Shoichi Kajima, Pres.; Ayao Katayama, Exec. VP*

26 (28) **$326.25**

Fru-Con Construction Corp.
15933 Clayton Road
Ballwin, MO 63022
(314) 391-6700

Volume includes $48 million of design/build work. Current projects include a $105 million, 11-story data center for Southwestern Bell Telephone Co. in St. Louis; a $109 million paper manufacturing facility on the West Coast; and a $50 million, 240,000-sq.-ft. warehouse/distribution center in the Midwest. Company has a new chief executive. Parent firm is Bilfinger + Berger, based in Mannheim, Germany. *Herbert Bodner, Pres., CEO*

27 (7) **$324.00**

HCB Contractors
1401 Elm St., 46th floor
Dallas, TX 75202
(214) 747-8541

Projects completed include a four-building, 312,000-sq.-ft. complex for AT&T Resource Management in Alpharetta, Ga., the 300,000-sq.-ft. Bullock's Media City retail mall in Burbank, Calif., and an addition and medical office building for Irving (Texas) Hospital. The new J.C. Penney Co. corporate headquarters in Plano, Texas, is scheduled for completion late this year. *Lawrence Wilson, Pres.; Henry Beck III, Exec. VP*

28 (38) **$320.00**

Austin Commercial Inc.
P.O. Box 2879
Dallas, TX 75221
(214) 443-5700

Current projects include the 1.2 million- sq.-ft. IBM Development Center and the 10-story Texas Medical Association R&D facility, both in Austin, Texas; the $46 million Oryx corporate headquarters office building and a 1 million-sq.-ft. headquarters for the Federal Reserve Bank, both in Dallas; and the 1.6 million-sq.-ft. EDS headquarters in Plano, Texas. *Ronald Gafford, Pres.*

29 (—) **$319.91**

Marnell Corrao Associates Inc.
4495 S. Polaris
Las Vegas, NV 89103
(702) 739-9413

Volume includes $273 million of design/build work. Company was listed last year in the former Design/Builders category. Current projects, all in Las Vegas, include the $180 million Treasure Island hotel/casino, the $22 million Durango High School, the $9.7 million Main Street Station hotel/casino, and the $7.5 million Stardust hotel/casino. *Anthony Marnell II, Chmn.*

30 (35) **$306.80**

Dick Corp.
P.O. Box 10896
Pittsburgh, PA 15236
(412) 384-1000

Volume includes $83 million of design/build work. Current projects include an $89 million H.J. Heinz Co. factory restructuring in Pittsburgh, a $220 million expansion of the Los Angeles County Jail, a $39 million rehabilitation of a Sony manufacturing facility in New Stanton, Pa., a new Veterans Administration medical center in Aspinwall, Pa., and rehabilitation of the Rockland (N.Y.) Psychiatric Center. *Dorsey Dick, CEO*

31 (34) **$290.00**

Torcon Inc.
P.O. Box 609
Westfield, NJ 07091
(908) 232-8900

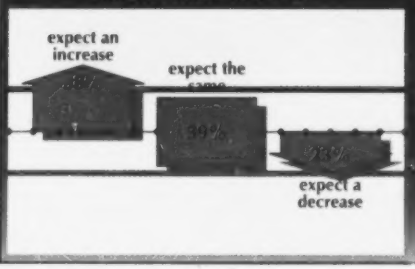
Current projects include $32 million of additions and alterations to Morristown (N.J.) Memorial Hospital, a $5 million addition to a Hoechst Celanese Corp. laboratory in Summit, N.J., a 400,000-sq.-ft. Federal Reserve Bank of New York operations center in East Rutherford, N.J., and $41 million of additions and alterations to St. Barnabas Medical Center, Livingston, N.J. *Benedict Torcivia, Chmn., CEO*

32 (22) **$260.46**

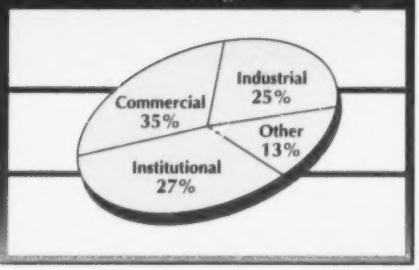
Blount Construction Division
P.O. Box 949
Montgomery, AL 36101
(205) 244-4000

Current projects include a $55 million California State Prison in Wasco, a $59 million manufacturing facility for Boeing Co. in Wichita, Kan., a $21 million guided weapons evaluation facility at Eglin Air Force Base, Fla., and a $9 million building at Burroughs-Wellcome Co., Greenville, N.C. *James Herndon, Pres., CEO*

What is the Contractors' Outlook for Revenues in 1992?



Breakdown of the Contractors' Billings



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CONTRACTORS

Sundt Corp. was general contractor for the three-building, 130,000-sq.-ft. Glendale (Ariz.) City Courts and Public Safety Complex. Photo: Ken Easley

33 (27) **$260.46**

PCL Enterprises Inc.
2000 S. Colorado Blvd.
Denver, CO 80222
(303) 753-6600

Current projects include the $240 million Mall of America in Bloomington, Minn., to open in August; a $42 million expansion and renovation of a general mail facility in Minneapolis; the $58 million Jefferson County Government Center in Denver; the $21 million Denver Arts Center; and a $232 million main terminal and parking facility at the new Denver airport. *J.D. Thompson, Vice Chmn., CEO*

34 (36) **$260.06**

Sundt Corp.
4101 Irvington Road
Tucson, AZ 85726
(602) 748-7555

Current projects include a $39 million Embassy Suites Hotel in Lake Tahoe, Calif.; a $20 million hangar and support facilities at Lockheed Western International Airport in Tucson; the $11 million Glendale (Ariz.) City Courts and Public Safety Building; a state prison in Florence, Ariz.; a $23 million high school in Sierra Vista, Ariz.; and an expansion of Tucson Mall. *H.W. Sundt, Chmn.; J. Doug Pruitt, Pres.*

35 (24) **$260.00**

Rudolph and Sletten Inc.
P.O. Box 4637
Foster City, CA 94404
(415) 572-1919

Current projects include the $105 million Apple Computer Inc. R&D Campus in Cupertino, Calif.; a Hewlett Packard R&D wafer fabrication facility in Palo Alto, Calif.; a $2.2 million seismic upgrading for two Hewlett Packard buildings in Santa Clara, Calif.; a $65 million Intel Corp. office building in Santa Clara; and a medical school laboratory building at Stanford University. *O.H. Rudolph Jr., Pres.; K.G. Sletten, Exec. VP*

36 (—) **$250.00**

Opus Companies
P.O. Box 150
Minneapolis, MN 55440
(612) 936-4444

All work was performed on a design/build basis. Company was listed last year in the former Design/Builders category. Current projects include the 1.5 million-sq.-ft. First Bank Place Office building in Minneapolis, an office building for American Medical Systems in Minnetonka, Minn., a distribution center for THK America in Schaumburg, Ill., and a U.S. Postal Service distribution center in Kent, Wash. *Gerald Rauenhorst, CEO*

37 (—) **$240.00**

J.S. Alberici
Construction Co.
2150 Kienlen Ave.
St. Louis, MO 63121
(314) 261-2611

Current projects include a $60 million Lever Brothers soap plant in St. Louis, a $70 million Ralston Purina Co. cereal plant in Sparks, Nev., $15 million of renovation and additions to Phelps County Regional Medical Center, Rolla, Mo., and the $34 million St. Louis Science Center, consisting of a new main building and a renovated existing facility. *Gabriel Alberici, Chmn.*

38 (47) **$240.00**

Marshall Contractors Inc.
75 Newman Ave.
Rumford, RI 02916
(401) 438-3500

Volume includes $75 million of design/build work. Current projects include a $40 million high field magnetic laboratory at Florida State University in Tallahassee, the 300,000-sq.-ft. BASF Biotechnology center in Worcester, Mass., a 250,000-sq.-ft. Polaroid manufacturing facility in New Bedford, Mass., and the 150,000-sq.-ft. AT&T Microelectronics semiconductor manufacturing facility in Orlando. *John Marshall III, Pres.*

39 (—) **$238.50**

Bechtel Group Inc.
50 Beale St.
San Francisco, CA 94105
(415) 768-1234

All work was performed on a design/build basis. Firm also is listed in the Engineers category and was listed last year in the former Design/Builders category. Current projects include a 140,000-sq.-ft. sterile products facility for Burroughs-Wellcome Co. in Greenville, N.C., a 12,000-acre Toyota proving ground north of Phoenix, and modification of a Cape Canaveral, Fla., missile launch complex. *Riley Bechtel, Pres.*

40 (41) **$230.00**

Kraus-Anderson
Construction Co.
525 S. 8th St.
Minneapolis, MN 55404
(612) 332-7281

Current projects include an 800-room Hilton Hotel and the 10-level Learnington municipal transit hub, both in downtown Minneapolis; a 320,000-sq.-ft. Macy's department store at the Mall of America in Bloomington, Minn.; and the 100,000-sq.-ft., Indian-operated Mystic Lake Bingo Casino in Prior Lake, Minn. *William Jaeger, Pres.*

41 (—) **$218.56**

Blake Construction Co.
1120 Connecticut Ave., N.W.
Washington, DC 20036
(202) 828-9000

Current projects include a $36 million county detention center in Arlington, Va.; the $63 million U.S. Holocaust Memorial Museum in Washington, D.C.; a $32 million medical facility at the University of California-La Jolla; a $21 million commuter rail transit station in Greenbelt, Md.; a $19 million shopping center in Chantilly, Va.; and the 818,000-sq.-ft. Portals Office Building in Washington. *Howard Bender, Chmn.*

42 (23) **$210.08**

The Weitz Co. Inc.
800 Second Ave.
Des Moines, IA 50309
(515) 245-7600

Current projects include the $26 million Wyndemere retirement community in Wheaton, Ill.; the $29 million central plant for the Denver International Airport now under construction; a building at the MCI Telecommunications complex in Colorado Springs; a $14 million border station in Nogales, Ariz.; and the $14 million Fine Arts Building at the University of Arizona in Tucson. *Glenn De Stigter, CEO*

43 (43) **$210.00**

Manhattan Construction Co.
1717 S. Boulder
Tulsa, OK 74119
(918) 583-6900

Current projects include the $58 million Lincoln Towers in Arlington, Va.; the $37 million Mobile (Ala.) Convention Center; the $81 million Fiesta Texas Show Park in San Antonio, Texas; a $9 million women's health care facility at Baptist Medical Center, Oklahoma City; the $62 million Jefferson County Prison in Beaumont, Texas; and a Federal Bureau of Prisons medical unit in Fort Worth, Texas. *L.F. Rooney III, Pres.*

44 (31) **$202.40**

Hardin Construction Group Inc.
1380 W. Paces Ferry Road, N.W.
Atlanta, GA 30327
(404) 264-0404

Current projects include the $25 million AT&T Universal Card Services Building in Jacksonville, Fla., a $50 million expansion of the Georgia World Congress Center in Atlanta, the $16 million Pembroke Lakes Mall in Pembroke Pines, Fla., and the $31 million Stouffers Concourse Hotel in Atlanta. *Earl Shell Jr., Chmn., CEO*

45 (—) **$197.95**

M.B. Kahn Construction Co.
P.O. Box 1179
Columbia, SC 29202
(803) 736-2950

Volume included $17 million of design/build work. Current projects include Dorchester High School in Charleston, S.C., a tower addition at Lexington Medical Center in West Columbia, S.C., a Law Center at Wake Forest University in Winston-Salem, N.C., Dutch Fork High School in Irmo, S.C., a new elementary school in Conyers, Ga., and the Mecklenburg County Detoxification Center in Charlotte, N.C. *William Neely, Pres.*

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Holder Construction Co. was general contractor for Allstate Insurance Co.'s new 135,000-sq.-ft. speculative office building in Orlando, Fla. Photo: Granger & Schwamberger Inc.

46
(17)
$184.80

Swinerton & Walberg Co.
580 California St.
San Francisco, CA 94104
(415) 421-2980

Current projects include the 600,000-sq.-ft. Watergarden office building in Santa Monica, Calif., the 300-room Ritz-Carlton Hotel in Pasadena, the Fresno (Calif.) City Hall, the Museum of Modern Art in San Francisco, a general mail facility in San Diego, and renovations of the *Los Angeles Times* printing plant in Costa Mesa and of a Sony Pictures movie studio in Culver City. *David Grubb, Pres.*

47
(—)
$172.00

The Haskell Co.
Haskell Building
Jacksonville, FL 32202
(904) 791-4500

Company was listed in the former Design/Builders category last year. Volume includes $154 million of design/build work. Current projects include a 650,000-sq.-ft. Montgomery Wards distribution center in Prince Georges County, Md., a 725,000-sq.-ft. Kraft General Foods distribution center in Norcross, Ga., and a 240,000-sq.-ft. U.S. Postal Service mail facility in Charleston, W. Va. *Preston Haskell, Pres.; Kennon Holmes, Exec. VP*

48
(46)
$169.90

Oltmans Construction Co.
10005 Mission Mill Road
Whittier, CA 90608
(310) 948-4242

Current projects include a $3.3 million office building for St. Jude Medical Center in Fullerton, Calif., a $3.9 million warehouse at Mira Loma (Calif.) Commerce Center, a $252,000 remodeling of the Art Center College of Design bookstore in Pasadena, Calif., a $408,000 R&D laboratory addition at Presto Food Products in Industry, Calif., and a $3.3 million warehouse for Contadina Foods in Hanford, Calif. *J.O. Oltmans II, Pres.*

49
(—)
$159.87

Sverdrup Corp.
13723 Riverport Drive
Maryland Heights, MO 63043
(314) 436-7600

Company was listed last year in the former Design/Builders category. Volume was entirely design/build work. Current projects include a 330,000-sq.-ft. office building in the Riverport development in St. Louis County, an 82,000-sq.-ft. office building for McDonnell Douglas Realty Co. in Titusville, Fla., and a municipal center for the city of St. Peters, Mo. *Brice Smith, Chmn., CEO*

50
(—)
$156.00

Bellemead Construction Corp.
4 Becker Farm Road
Roseland, NJ 07068
(201) 740-1110

Firm was listed last year in the former Design/Builders category. Volume includes $6 million of design/build work. Projects completed include a 244,000-sq.-ft. office building in Warren, N.J., a 140,000-sq.-ft. office building in Edison, N.J., a 450,000-sq.-ft. office building in Washington, D.C., and a 140,000-sq.-ft. office building in Germantown, Md. *James Kearney, Sr. VP*

51
(45)
$154.14

Holder Construction Co.
3333 Cumberland Circle
Atlanta, GA 30339
(404) 988-3000

Current projects include the $11 million phase I of Allstate Summit Park Place in Orlando, the $47 million Walt Disney World headquarters building in Orlando, the $56 million Three Ravinia Drive office building in Atlanta, the $175 million Georgia Dome (joint venture) in Atlanta, the $50 million Delta Air Lines reservations center in Atlanta, and the Shepard Spinal Center in Atlanta. *Robert Holder, Chmn.; Thomas Holder, Pres.*

52
(30)
$150.50

W.E. O'Neil Construction Co.
2751 N. Clybourn Ave.
Chicago, IL 60614
(312) 327-1611

Current projects include the $30 million Safety-Kleen corporate office in Elgin, Ill., a $17 million library for DePaul University in Chicago, a $25 million distribution center for Baxter Healthcare Corp. in Waukegan, Ill., a $35 million renovation of the former downtown Chicago Goldblatt's department store for DePaul University, and a $43 million MECA/Panasonic warehouse/office facility in Elgin, Ill. *William O'Neil, Chmn.*

53
(—)
$149.60

Baugh Enterprises
P.O. Box C-14135
Seattle, WA 98114
(206) 726-8000

Current projects include a $3.8 million remodeling of the Vintage Plaza Hotel and a $9 million remodeling of the Benson Hotel, both in Portland, Ore.; a $12.8 million addition at Bess Kaiser Hospital in Portland; the 600 Broadway Medical Office Building in Seattle; the $25 million St. Joseph Community Hospital in Vancouver, Wash.; and a *Seattle Times* newspaper facility in Bothell, Wash. *Robert Baugh, Chmn., CEO*

54
(—)
$145.34

C.R. Meyer and Sons Co.
P.O. Box 2157
Oshkosh, WI 54903
(414) 235-3350

Volume includes $16 million of design/build work. Current projects include an $85 million manufacturing facility at Bay West Paper Co. in Middletown, Ohio, a 220,000-sq.-ft. office facility for Schneider National in Ashwaubenon, Wis., a $36 million manufacturing/office facility for Fox River Fiber Co. in DePere, Wis., and a $90 million Kimberly-Clark manufacturing facility in Menasha, Wis. *Fred Pinkerton, Pres.*

55
(37)
$135.34

Mellon Stuart Construction Inc.
One North Shore Center
Pittsburgh, PA 15212
(412) 323-4600

Volume includes $16 million of design/build work. Firm, which also is listed in the Construction Managers category, became a wholly owned subsidiary of Michael Baker Corp. in September 1991, under the name of Mellon Stuart Construction. Current projects include an $84 million juvenile center addition in Chicago and a data center for Pittsburgh National Bank. *Robert Luffy, Pres.*

Sverdrup Corp. designed and built a new city hall and community center for St. Peters, Missouri's fastest-growing municipality.

56
(—)
$135.05

United Dominion Construction
6000 Poplar Ave.
Memphis, TN 38119
(901) 685-5899

Company also is listed in the Specialty Contractor category. Volume includes $33 million of design/build work. Current projects include a $29 million state correctional facility in Tiptonville, Tenn., the $13 million City Coliseum in Tupelo, Miss., and the $22.8 million University of Tennessee Science and Engineering Center in Knoxville. *I.B. Prude, Pres.*

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CONTRACTORS

J.E. Dunn Construction Co. was general contractor for the $18 million Kansas City Plaza Suites Marriott Hotel, completed in 1991. Photo: J. Koomse

57
(—)
$134.28

Rudolph/Libbe Cos. Inc.
6494 Latcha Road
Walbridge, OH 43465
(419) 241-5000

Volume includes $33 million of design/build work. Current projects include a $30 million Ford Motor Co. paint facility in Norfolk, Va., a $27 million Thomson Consumer Electronics glass manufacturing facility in Circleville, Ohio, a $14.7 million Burlington Air Express terminal at Toledo Airport, a $12 million Honda R&D facility in Marysville, Ohio, and a $7 million building for the Toledo Museum of Art. *Frederick Rudolph, Pres.*

58
(—)
$134.00

Robert E. Bayley Construction Inc.
P.O. Box 4567
Seattle, WA 98104
(206) 621-8884

Current projects include three Nordstrom stores — at the Mall of America in Bloomington, Minn., the Towson (Md.) Town Center and in Freehold, N.J. Other projects include the 650,000-sq.-ft. Moreno Valley (Calif.) Mall, and a 95,000-sq.-ft. campus center at Chapman University in Orange, Calif. *Robert Bayley, CEO; Ronald Bayley, Pres.*

59
(—)
$133.00

James N. Gray Construction Inc.
250 W. Main St.
Lexington, KY 40507
(606) 281-5000

Firm was listed last year in the former Design/Builders category. All work was done on a design/build basis. Current projects include a $4.1 million Procter & Gamble distribution facility in Lima, Ohio, a $7.8 million Hitachi manufacturing facility in Harrodsburg, Ky., a $6.9 million Andrew Jergens Co. R&D facility in Cincinnati, and a printing facility in Lebanon, Ohio. *C. Howard Gray, Pres.*

60
(—)
$130.00

Ryan Construction Co. of Minnesota
900 Second Ave. S.
Minneapolis, MN 55402
(612) 339-9847

Volume includes $45 million of design/build work. Current projects include the $27 million First Bank operations center in St. Paul; three 112,000-sq.-ft. Target discount stores — in Mason City, Iowa, Coon Rapids, Minn., and Woodbury, Minn.; a $10 million remodeling of a 3M Co. building in St. Paul; and the $4.5 million Woodbury Village retail center in Woodbury, Minn. *James Ryan, Pres*

61
(40)
$128.45

Walsh Construction Co.
101 Oakview Drive
Trumbull, CT 06611
(203) 373-7900

Volume includes $21 million of design/build work. Current projects include a $120 million federal office building in Oakland, Calif., a $129 million renovation of four buildings at City College in New York City, the $90 million John Cohalan Courthouse complex in Central Islip, N.Y., a $60 million county sheriff's operations center in French Camp, Calif., and a laboratory at Sandoz Research Institute in East Hanover, N.J. *Thomas Walsh, Pres.*

62
(48)
$125.00

Nielsen Construction Co.
3127 Jefferson St.
San Diego, CA 92110
(619) 291-6330

Volume includes $36 million of design/build work. Current projects include the $20 million Grossmont medical office building in La Mesa, Calif., the $35 million Rohr Inc. manufacturing/office building in Chula Vista, Calif., a nine-story medical office building at Scripps Hospital in La Jolla, Calif., and a $7 million manufacturing/office building for Hughes Network Systems in San Diego. *Stephen Marble, Pres., CEO*

63
(—)
$123.00

Marshall Erdman & Associates Inc.
5117 University Ave.
Madison, WI 53705
(608) 238-0211

Firm, which specializes in the design and development of ambulatory health care facilities, was listed last year in the former Design/Builders category. All work was done on a design/build basis. Current projects include a 300,000-sq.-ft. group practice facility in Lexington, Ky., and the 215,000-sq.-ft. Central Plains Clinic in Sioux Falls, S.D., *Roger Hauck, Pres.*

64
(—)
$118.85

J.E. Dunn Const. Co.
929 Holmes
Kansas City, MO 64106
(816) 474-8600

Current projects include a $24.7 million federal building and courthouse in Kansas City, Kan., the $6.9 million John Fitzgibbon Memorial Hospital in Marshall, Mo., the $18 million Kansas City Plaza Suites Marriott hotel in Kansas City, Mo., the Liberty (Mo.) Community Center, and the $15 million Medical Plaza III office and garage in Kansas City, Mo. *William Dunn, Chmn.; Terrence Dunn, Pres.*

65
(—)
$116.00

Schumacher & Forelle Inc.
277 Northern Blvd.
Great Neck, NY 11021
(516) 482-8730

Firm was listed last year in the former Design/Builders category. All work was done on a design/build basis. Current projects include a 260,000-sq.-ft. Boehringer Ingelheim Pharmaceuticals Inc. office building in Ridgefield, Conn., a new office building for AIL Systems in Deer Park, N.Y., and the renovation and expansion of a Siemens manufacturing facility in Norwood, Ohio. *James Schubauer, Pres.*

66
(44)
$114.00

The Lott Group
3500 S. Gessner
Houston, TX 77236
(713) 266-5688

Current projects include a 107,000-sq.-ft. bioscience laboratory building at Rice University in Houston, six 500-bed jails in Texas, the 400-room Ritz-Carlton Hotel in McLean, Va., the 480,000-sq.-ft. Five Greenspoint Plaza office building in Houston, an addition to Reading (Pa.) High School, the Square 677 office building in Washington, D.C., and additions to the U.S. Navy Hospital in Portsmouth, Va. *A.L. Jensen, Chmn.*

67
(—)
$110.83

Hospital Building & Equipment Co.
11330 Olive St. Road
St. Louis, MO 63141
(314) 567-9000

Company was listed last year in the former Design/Builders category. All work was performed on a design/build basis. Current projects include the $16.6 million St. Agnes Hospital in Baltimore, the $11.8 million Jennie Edmundson Memorial Hospital in Council Bluffs, Iowa, a hospital in Princeton, Minn., and a regional medical center in Joplin, Mo. *Fred Kummer, Pres.*

68
(—)
$110.00

Harbour Contractors Inc.
22 E. Chicago Ave.
Naperville, IL 60540
(708) 717-4900

Current projects include a $6.3 million building renovation for CBI Industries in Oak Brook, Ill., a $6.8 million office building for CBI Industries in Plainfield, Ill., the renovation of two American Airlines hangar buildings at O'Hare International Airport in Chicago, a $6.7 million corporate headquarters for First Oakbrook Bancshares, Oak Brook, Ill., and a processing facility for NutraSweet in Manteno, Ill. *Patrick Harbour, Pres.*

69
(—)
$109.60

George A. Fuller Co.
919 Third Ave.
New York, NY 10022
(212) 355-2700

Current projects include a $16 million building for the North Shore Unitarian Universalist Society in Manhasset, N.Y., the $9.9 million Somers (Conn.) High School, a $50 million Marriott Hotel in New York City, an $18 million renovation and expansion of the Guggenheim Museum in New York City, and three prototype primary schools for the New York City School Construction Authority. *Wilfred Mango Jr., Chmn.*

70
(—)
$108.85

Korte Construction Co.
The Annex - Suite 300
700 St. Louis Union Station
St. Louis, MO 63103
(314) 231-3700

Current projects include a $17 million National Air and Space Administration building in Huntsville, Ala., an $18 million distribution center for Walgreen Co. in Bethlehem, Pa., a $5.6 million Anheuser-Busch Co. brewery expansion in Williamsburg, Va., a warehouse for Lanter Co. in Madison, Ill., and a manufacturing facility for Par-Way in St. Clair, Mo. *Vernon Eardley, Pres.*

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SPECIALTY CONTRACTORS

RECONSTRUCTION AND INSTITUTIONAL WORK INCREASE FOR THE SPECIALTY CONTRACTORS

Industrial work levels off, while commercial activity remains steady

1 (1) **$1,169.00**

JWP Inc.
2975 Westchester Ave.
Purchase, NY 10577
(914) 935-4000

JWP specializes in mechanical, electrical and information systems for advanced technology, environmental, power generation and transportation/transit projects. Firm has offices in all major cities of the U.S., Canada and United Kingdom. It also has operations in the Far East, Middle East and Africa. Current projects include a new international terminal at Chicago's O'Hare Airport. *Andrew Dwyer, Chmn., CEO*

2 (—) **$290.80**

Fischbach Corp.
7 Hanover Square
New York, NY 10004
(212) 440-2100

Fischbach has numerous mechanical and electrical contracting subsidiaries. Its project types include hospitals, correctional facilities and airports, as as well as transit systems, power plants and waste water treatment facilities. Firm was purchased by American International Group in 1990 and is re-entering the international market. *Robert R. Kiley, Pres., CEO*

3 (3) **$247.70**

Henkels & McCoy Inc.
985 Jolly Road
Blue Bell, PA 19422
(215) 283-7800

Henkels & McCoy specializes in the engineering, installation, management and maintenance of communications systems. Last year, 35 percent of its work was commercial, 15 percent institutional and 20 percent industrial. Another 30 percent, excluded from the dollar figure above, involved utility plants. All but 6 percent of its work involved reconstruction. *Paul M. Henkels, CEO*

4 (2) **$192.00**

Harmon Contract W.S.A. Inc.
2001 Killebrew Drive
Suite 400
Bloomington, MN 55425
(612) 851-9949

The economy's downturn prompted Harmon to seek international markets. As a result, the curtain wall and glazing contractor opened offices in Singapore, London, Paris and Frankfurt. Firm also acquired several companies, including Norment and Airteq. Commercial projects accounted for 100 percent of its work last year. *Gary W. Haider, Pres.*

5 (7) **$144.55**

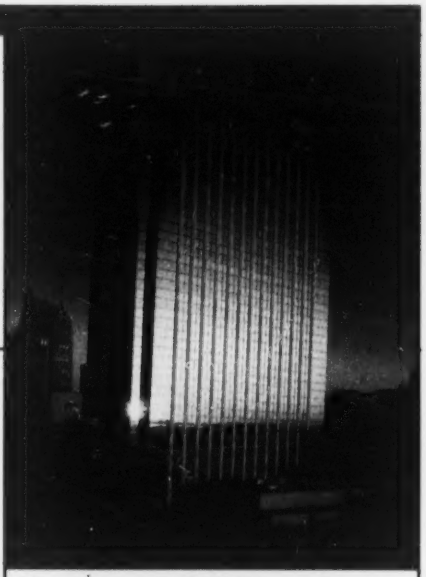
Limbach Constructors Inc.
4 North Shore Center
Pittsburgh, PA 15212
(412) 359-2100

This mechanical contractor has offices in eight U.S. cities, including Boston, Detroit, Los Angeles and Orlando, Fla. Sixty percent of its work was commercial, 20 percent institutional and 19 percent industrial last year. Recent projects include One Detroit Center, a high-rise office building in Detroit. *Stephen B. Wurzel, Chmn., CEO; Charles L. Boyd, Pres., COO*

6 (4) **$123.48**

Baker Concrete Construction Inc.
900 N. Garver Road
Cincinnati, OH 45050
(513) 539-4000

This concrete contractor continues to specialize in commercial high-rise and industrial construction. Seventy-nine percent of its work involved corporate facilities last year, while 20 percent was government-related. Firm also has offices in Cincinnati and Houston. *Daniel L. Baker, Pres.*



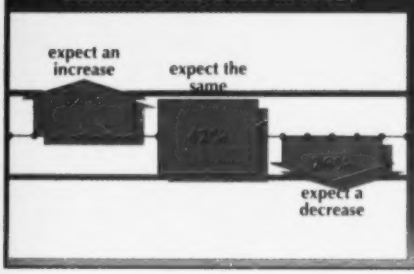
***The 29-story LaSalle Plaza** office building in Minneapolis is a recent project of Harmon Contract W.S.A. Inc.*

7 (6) **$120.00**

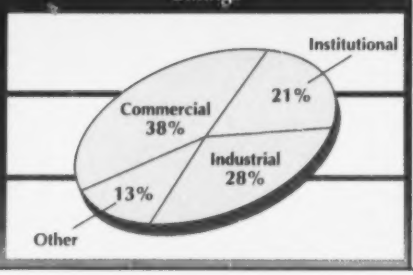
Bryant Universal Roofing Inc.
1245 S. 7th St.
Phoenix, AZ 85034
(602) 952-5070

Seventy-eight percent of this roofing and waterproofing contractor's work involved reconstruction last year. Recent projects include the Excalibur Hotel and the Sands Convention Center, both in Las Vegas, and the America West Arena in Phoenix. Firm expects revenues to rise by 4 percent this year. *Wayne Mullis, Chmn., CEO*

What is the Specialty Contractors' Outlook for Revenues in 1992?



Breakdown of the Specialty Contractors' Billings



8 (—) **$103.86**

Sasco Electric
12900 Alondra Blvd.
Cerritos, CA 90701
(310) 926-0900

Dollar volume above includes $15.4 million of design/build electrical work. Sasco has other California offices in Newport Beach, Ventura, Mountain View and San Francisco. Fifty percent of its work was commercial, 20 percent institutional and 20 percent industrial last year. Recent projects include the John Wayne Airport in Irvine, Calif., and the Nikko Hotel in Los Angeles. *Larry Smead, CEO, Chmn.*

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SPECIALTY CONTRACTORS

9 (8) $90.90
Sauer Inc.
30 51st St.
Pittsburgh, PA 15201
(412) 687-4100

Sauer performs mechanical contracting for a variety of project types, including labs, hospitals, university buildings and office high-rises. Thirty percent of its work involved reconstruction last year. Recent projects include a Ritz-Carlton Hotel in Aurelia Island, Fla., and the renovation of a VA hospital in Aspinwall, Pa. *Robert T. McCormick, Pres.; W.N. Steitz, Exec. VP*

10 (13) $88.31
Williard Inc.
375 Highland Ave.
Jenkintown, PA 19046
(215) 885-5000

Williard continues to specialize in mechanical, electrical and sheet metal construction services for commercial and institutional buildings. Reconstruction projects accounted for 49 percent of its work last year, up from 33 percent in 1990. Firm expects revenues to decline slightly this year. *Joseph F. Doody, Pres.; Robert J. Keefrider, VP Finance*

11 (10) $87.75
The Western Group
1637 N. Warson Road
St. Louis, MO 63132
(314) 427-6733

Firm's specialty is restoration and waterproofing of masonry and concrete. It also provides waterproofing services for new construction. Firm has 33 offices nationwide. Recent projects include the masonry restoration of the Texas State Capitol in Austin and the Ohio State Capitol in Columbus. *Ben Bishop, Chmn., CEO*

12 (9) $82.00
Air Conditioning Co.
6265 San Fernando Road
Glendale, CA 91201
(818) 244-6571

This firm continues to design and install HVAC systems for a broad array of building types, including clean rooms, shopping centers and theaters. Commercial projects accounted for two-thirds of its activity last year. Almost one-quarter of its work involved reconstruction. Firm expects revenues to remain the same this year. *John Aversano, Pres.*

13 (12) $70.30
United Dominion Construction
6000 Poplar Ave.
Memphis, TN 38119
(901) 685-5899

Firm is also listed in the Contractors category. It has offices in six U.S. cities, including Knoxville, Tenn., and Orlando, Fla. Firm continues to specialize in electrical contracting and the construction of pre-engineered buildings. Half of its work involved industrial buildings last year. Firm expects revenues to rise this year. *I.B. Prude, Pres.*

***The Western Group restored** Atlanta City Hall's terra cotta exterior during a two-year period.* Photo: The Western Group

14 (11) $66.50
Scott Companies
1919 Market St.
Oakland, CA 94607
(510) 834-2333

This mechanical contractor's work is concentrated in the West. C.I.I. project types include hotels, offices and manufacturing facilities. Forty percent of its work involved reconstruction last year. Recent projects include the renovation of the Sheraton Plaza Hotel in San Francisco. *Joseph Guglielmo, Pres., CEO*

15 (5) $65.70
MMC Corp.
11100 Ash, Suite 100
Leawood, KS 66211
(913) 469-0101

This firm was formerly known as Midwest Mechanical Contractors Inc. Its specialties include health care and industrial facilities. Fifty percent of work was commercial, 30 percent industrial and 10 percent institutional last year. Non-C.I.I. work, excluded from the dollar figure above, included utility plants. Firm expects revenues to decline this year. *Thomas D. Sanders, CEO*

Nineteen of the top 20 firms work in all segments of the C.I.I. market

16 (14) $63.70
Murphy Co.
1340 North Price Road
St. Louis, MO 63132
(314) 997-6600

Firm's staff of 100 includes 40 mechanical engineers. Ten percent of its work was design/build last year. Almost all work involved new construction. Recent projects include a 100-cell prison in Jefferson County, Mo. Its non-C.I.I. work, excluded from the dollar figure above, includes mining, refining and chemical plants. *James Murphy, Pres., CEO*

17 (16) $63.19
Ivey Mechanical Co.
P.O. Box 610
Kosciusko, MS 39090
(601) 289-3646

Ivey continues to perform mechanical contracting services for commercial, institutional and industrial projects. Fifty percent of its work involved corporate facilities last year. Recently completed projects include the Vanderbilt Plaza Hotel in Nashville and an Embassy Suites Hotel in Orlando, Fla. *Joseph Ivey, Chmn., CEO; Larry Terrell, Pres., CEO*

18 (18) $58.75
ISEC Inc.
P.O. Box 6849
Englewood, CO 80155
(303) 790-1444

This interiors contractor is emphasizing preconstruction services to owners, architects and general contractors. Its project types include laboratory, health care, hospitality, educational and commercial facilities. Firm has offices in six U.S. cities, including Los Angeles, San Francisco and Seattle. *Lewis L. Anderson, Pres.; David C. Necker, Sec./Treas.*

19 (19) $58.62
U.S. Engineering Co.
3433 Roanoke Road
Kansas City, MO 64111
(816) 753-6969

Dollar figure above includes more than $10 million of design/build and general contracting work. This mechanical contractor is placing more emphasis on industrial and process markets. Twenty percent of its work involved reconstruction last year. Five percent was government-related. Firm expects revenues to remain the same this year. *Henry Nottberg III, Pres.*

20 (15) $54.00
Guarantee Electrical Co.
4161 Gravois Ave.
St. Louis, MO 63116
(314) 772-5400

Dollar figure above includes $16 million of design/build work. Firm emphasizes electrical contracting and interior finishes. Fifty percent of its work was commercial, 30 percent industrial and 10 percent institutional last year. Recent projects include an addition to St. John's Mercy Hospital in St. Louis. Firm recently sold GISMO, its manufacturing subsidiary. *Charles W. Oertli, Chmn.; Fred Oertli Jr., Pres.*

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